

HIV/AIDS, hepatitis and sexually-transmitted infection prevention among Egyptian substance users

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Abstract

This thesis explores cultural influences in high-risk behaviour among Egyptian substance users in the Middle Eastern, conservative, male-dominated and predominantly Muslim society in which they live. It investigates why they practice unprotected sex despite the risk of infection by blood-borne viruses (BBVs) and sexually-transmitted infections (STIs), and the factors influencing their risk practices. The study seeks to inform policy and to improve methods of preventing BBVs/STIs among Egyptian substance users, particularly through health/sex education in peer groups and schools and through the media, civil society organisations and the criminal justice system.

Data was collected via a questionnaire surveying the knowledge, attitudes and practices (KAP) of 410 substance users. Responses were compared according to the gender, age and education of the respondents and whether they took their drugs via intravenous injection. Four focus group discussions were held with twenty-four substance users, including female commercial sex workers (FCSWs), men who have sex with men (MSM), intravenous drug users (IVDUs), and people living with HIV (PLHIV), as well as in-depth interviews with fourteen policymakers.

Most respondents had little or moderate knowledge about the hepatitis C and/or B viruses and little knowledge about HIV or its association with sex and drug injection. Knowledge about risky sexual behaviour connected with BBV/STI infection among substance users was low. The respondents' attitudes and practices regarding sex and intravenous drug use indicated that they were at high risk of infection. They had negative attitudes towards PLHIV, towards each other in the substance-user population and towards other overlapping subgroups of most-at-risk populations (MARPs), i.e. FCSWs, MSM and IVDUs. Respondents with higher education and older people were found to have greater knowledge of safer sex practices. Males and IVDUs had significantly higher scores for KAP regarding IV drug use than females and non-IVDUs. The females' KAP regarding safe sex tended to be better than that of the males.

Stigma, gender and religion had a significant influence on substance use and sexual behaviour. These three factors embedded in the culture form a taboo about drugs and sex, impair substance users' quality of life and deprive them, especially the females, of their rights, including the rights to education, employment, medical treatment, marriage and children. These factors also affect the substance users' families, the judiciary system, healthcare institutions and society at large. HIV-related stigmatisation was greater than that for other BBVs/STIs. HIV-related stigmatisation with regard to infection via gay sex was greater than that due to heterosexual sex or IV drug use. The media potentiates the stigmatisation of substance users and PLHIV by showing negatives images of these groups, causing them to suffer strongly from public shaming, desertion, seclusion, imprisonment and unemployment. Recovery is harder for female than for male substance users due to the harsher stigmatisation. Religion plays a pivotal role in Egyptians' lives, and most of the participants were fatalists.

The participants said that they would prefer the following preventive interventions: a) sex education programmes to be introduced in drug rehabilitation programmes, police stations and prisons; b) the launch of opioid substitution therapy programmes in drug detoxification centres; c) police referral of arrested active substance users to drug detoxification and rehabilitation centres; d) a free rehabilitation service for poor and illiterate substance users; e) a greater number of wide-ranging rehabilitation programmes for MARPs.

Glossary

AA:	Alcoholics Anonymous
AIDS:	Acquired immunodeficiency syndrome
ARVs:	Antiretroviral drugs
BBVs:	Blood-borne viruses
BBSS:	Biological and behavioural surveillance survey
CDC:	Centers for disease control and prevention
CSO:	Civil society organisation
DHS:	Demographic and Health Survey
DSM:	Diagnostic and Statistical Manual of Mental Disorders
EMENA:	Extended Middle East and North Africa region
EMR:	Eastern Mediterranean region
EMRO:	Eastern Mediterranean Regional Office
FBO:	Faith-based organisation
FCSW:	Female commercial sex worker
FGD:	Focus group discussion
FHI 360:	Family Health International 360 programme
GBP:	British pound sterling
GBV:	Gender-based violence
GIPA:	Greater involvement of people living with HIV/AIDS
HARPAS:	HIV/AIDS Regional Programme in the Arab States
HBc-Abs:	Hepatitis B core antibodies
HBs-Abs:	Hepatitis B surface antibodies
HBs-Ag:	Hepatitis B surface antigen
HBV:	Hepatitis B virus
HCV:	Hepatitis C virus
HCV-Abs:	Hepatitis C virus antibodies
HE:	Health education
HIV:	Human immunodeficiency virus
HPV:	Human papilloma virus
HR:	Human rights
HSV:	Herpes simplex virus
HSV-2:	Herpes simplex virus Type 2
IDI:	In-depth interview
IV:	Intravenous
IVDU:	Intravenous drug user/intravenous drug use (depending on context)
KAP:	Knowledge, attitude and practice
LAS:	League of Arab States
LGBT:	Lesbian, gay, bisexual and transgender/transsexual
M&E:	Monitoring and evaluation
MARPs:	Most-at-risk populations
MB:	Muslim Brotherhood
MCSW:	Male commercial sex worker
MENA:	Middle East and North Africa
MOH:	Ministry of Health
MSM:	Men who have sex with men/man who has sex with men
NA:	Narcotics Anonymous
NAP:	National AIDS Programme Egypt
NG:	Neisseria gonorrhoeae
NGO:	Non-governmental organisation

OTC:	Over the counter
PLHIV:	People living with HIV/AIDS
PRB:	Population Reference Bureau
S&D:	Stigma and discrimination
SE:	Sex education
SRH:	Sexual and reproductive health
SSA:	Sub-Saharan Africa
STI:	Sexually-transmitted infection
TA:	Thematic analysis
UAE:	United Arab Emirates
UEA:	University of East Anglia
UN:	United Nations
UNAIDS:	Joint United Nations Programme on HIV/AIDS
UNDP:	United Nations Development Programme
UNFPA:	United Nations Population Fund
UNICEF:	United Nations Children's Fund
UNIFEM:	United Nations Development Fund for Women
UNODC:	United Nations Office on Drugs and Crime
USAID:	US Agency for International Development
VCCT:	Voluntary confidential counselling and testing
WHO:	World Health Organization

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1. Introduction

This chapter starts by throwing some light on the HIV problem in Egypt and then states the aim, purpose, rationale and objectives of the research. This is followed by an explanation of the terminology used, and lastly by a discussion of how the topic of research, the research location and the external supervisor were chosen.

1.1. Statement of the problem in Egypt

The spread and risk of blood-borne viruses (BBVs), the human immunodeficiency virus (HIV), the hepatitis B and C viruses (HBV and HCV) and other sexually-transmitted infections (STIs) are increasing in Egypt due to unsafe sexual practices and unsafe drug use. This sexual and drug/substance-using behaviour is heavily influenced by the male-dominated, Middle-Eastern conservative Muslim culture. The culture and religion inform societal stigmatisation and gender power relations, which in turn influence sexual and drug-use behaviour. Yet there has been very little research on how the Egyptian culture influences unsafe sex, substance use and the risk of infection, and research into this is needed so that preventive strategies such as health education can be based on firm evidence.

Due to the economic pressure of the last three decades in Egypt there have been growing changes to social and cultural norms. Young people find it difficult to plan a future because of the lack of work and housing opportunities, which delays the age of marriage and starting a family. Due to the high unemployment rate it is usual to see many young people of both genders on the streets passing the time by congregating and entertaining themselves in ways that help them to forget their difficult situation. When speaking to them about BBVs and STIs it is clear that many of their practices, such as unsafe drug use and unprotected sex with multiple partners, are more than one would expect in a conservative religious Middle Eastern society and are high-risk. This places a valuable and vulnerable population in danger, especially when these conditions correlate with poor knowledge about the subject and a high-risk attitude.

In 2011, in partnership with the League of Arab States (LAS), the Joint United Nations Programme on the human immunodeficiency virus and acquired immunodeficiency syndrome (UNAIDS) released a report on the HIV epidemic in the Arab world. The report states that although the prevalence of HIV in the region is still low, the increase since 2001 makes the area one of the two regions in the world with the fastest-growing HIV

epidemics. While mentioning that ten years ago HIV was not an issue, it reports that recently all Arab countries have become more involved in responding to this rise in HIV. Civil society organisations (CSOs) play a big role in addressing this epidemic, yet the implementation of their programmes of the most at-risk populations (MARPs) continues to present a challenge. Working with key populations is difficult because of the acute stigma and discrimination (S&D) around the issue. Ministries of Health (MOHs) generally do not offer sufficient support to these groups. The report recommends reviewing the policies and laws hindering access to human rights-based HIV prevention and treatment services. It is also relevant that the spread of HIV has been found to be exacerbated by conflict and economic instability.

Islamic values teach that extra-marital sex is sinful, but as Maulana, Krumeich and Van Den Borne (2009) point out in Kenya, unprotected sex is still widely practised in the Islamic world. The stigmatisation and discrimination associated with sinful behaviour prevent those who need medical advice from seeking it, leading to increased transmission of BBVs/STIs. Overall, however, the UNAIDS and LAS report asserts that because of the strict religious values related to sexual activity there is still a relatively low incidence of HIV in the Arab world.

McGirk (2008) argues that if stigma and discrimination against MARPs and people living with HIV/AIDS (PLHIV) hamper prevention and treatment in the Islamic world, enrolling influential religious leaders could be a key to tackling the problem. S&D compel groups at high risk to hide so that medical staff, particularly in the Arab world, are not able to detect or treat them. MARPs' avoidance or delay in seeking medical advice due to disgrace or fear that they will be abandoned, humiliated, rejected, deported or even imprisoned alarms regional health authorities. McGirk states that even though sex education (SE) and HIV prevention are included in the school curriculum for all 16-year-old Palestinian pupils, people prefer to hear about these issues through Friday prayers (the primary Muslim prayer day at the mosque) or Sunday sermons (in the case of Christians). Two years after religious leaders condemned the Gay Pride march through Jerusalem in 2006, prominent Muslim and Christian Arab religious leaders broke previous taboos by demanding more public expression of compassion for PLHIV. This approach has proven to be the most promising way of abolishing HIV-related S&D in the Arab world. The initiative inspired a pioneering health programme in Iran, a Muslim non-Arab country within the Middle East and North Africa (MENA) region, founded by two physicians to convince *ayatollahs* (senior Shiite imams) to allow treatment and support for carriers of

sexually-transmitted infections and to consider needle exchange and condom distribution at rehabilitation clinics for intravenous drug users.

1.2. Reflections on my background and experience in relation to this research

As an Egyptian, a Coptic Orthodox Christian and a male physician, my beliefs and experiences influenced the fashion in which I conducted this research; e.g. the questions I asked and how I collected and interpreted the data. However, I tried not to let my bias affect me while conducting the qualitative research, and to keep an objective distance from all the participants and subjects investigated.

I had been working as a gastroenterologist with substance users in an Egyptian drug rehabilitation project since the mid-1990s when, in the summer of 2003, Dr Ehab El Kharrat, founder of the Freedom Programme, invited me to lecture on HCV and HBV to substance users in his programme and at variously-connected domestic and international training schools and workshops. These schools primarily included rehabilitation graduate substance users, doctors, nurses, pharmacists, psychologists, social workers, activists and NGO volunteers concerned with substance use and BBVs/STIs. My participatory training style tended to generate rapport with substance users in particular, and I had the privilege of listening to many of them as they spoke about their practices, answering their queries and at times even giving one-to-one counselling. Their queries were primarily concerned with STIs plus BBVs; hence I sensed the urgency of raising awareness in this crucial domain. Therefore I started giving sessions about the prevention and treatment of STIs, which include BBVs. My familiarity with substance use over the last 17 years and my established role as a lecturer/gastroenterologist strengthened my perceived role as an authority figure in the Freedom Programme.

Throughout the past ten years I have gained the trust of the Freedom Programme's president and of the rehabilitation graduates themselves as a practising clinician and trainer of trainers. However, I lacked specific knowledge about what exactly would best protect Egyptian substance users in their conservative, Middle Eastern, Muslim and male-dominated community with its highly enacted cultural stigma and discrimination against substance users, particularly MARPs.

In my work for the United Nations Development Programme (UNDP) with the HIV/AIDS Regional Programme in the Arab States (HARPAS) I noticed the escalating figures for new HIV infections in Egypt. The MOH denied the estimated figures, which

differed widely from the reported figures. Enacted cultural S&D prohibits substance users stepping forward to utilise preventive and treatment facilities, and this made me determined to do more research and learn the best BBV/STI prevention strategies, in particular those for HIV, HCV and HBV. These prevention efforts would need to work specifically with Egyptian social, religious and cultural norms and according to what Egyptian substance users see as most appropriate from their perspective.

1.3. Aim, purpose and rationale of the research

The overall aim of this research was to understand why people practice unsafe sex and drug use, considering the risk of infection by BBVs/STIs, and what motivates this and discourages them from changing their risk practices.

The purpose of the study is to use the knowledge and understanding gained to inform policy and improve methods of preventing the spread of BBVs and STIs among substance users in Egypt. This is especially needed throughout the education system, whether as part of the school curriculum or through the media, peer groups, NGOs or health services. It is also needed for all those who work with young people, substance users, gay men and commercial sex workers, whether they are health professionals, counsellors, the police or part of the legal and court services. It is essential that they address high-risk behaviour to prevent the spread of BBVs/STIs.

The rationale behind the research is that the literature review identifies gaps in existing knowledge regarding high-risk behaviour and opportunities for the prevention of HIV, HCV, HBV and other STIs among Egyptian substance users. In particular, the links between substance use, gender and sexuality and BBV/STI infection are not well understood. This research aims to fill these gaps by investigating these factors among substance users and their subgroups of MARPs.

1.4. Detailed objectives of the research

1.4.1. Quantitative study

The objective of the quantitative study was to describe the knowledge, attitudes and practices of the study population of substance users residing for rehabilitation at the facilities of an Egyptian drug rehabilitation programme, the staff there, and active substance users gathered via the outreach sector by peers on the same drug rehabilitation programme, and to investigate the statistical associations between participants'

characteristics and their sexual and drug-use knowledge, attitudes and practices (KAP), as outlined below.

Further quantitative objectives included describing substance users' knowledge, attitude and practice regarding their sexual behaviour and intravenous drug use and BBV/STI infection. The study also describes the substance users' perceptions of health education and other prevention methods, and investigates the relationships between these characteristics and the respondents' age, gender, education level and method of substance use (intravenous or non-intravenous).

1.4.2. Qualitative studies

The objectives of the qualitative part of the research were to elicit the beliefs and experiences of a smaller sample of substance users about themselves and people like them, and to observe their interpersonal interactions. I also sought the objective beliefs of a sample of experts, policymakers and decision-makers, some of whom were rehabilitation graduates themselves, about substance users.

1.5. Terminology

The National Alliance of Advocates for Buprenorphine Treatment (2010) mentions that language is very important in initiating or abolishing stigma. The Alliance states that stigmatisation is the most significant obstacle facing those with a substance use disorder, and that it discourages them from seeking medical advice. It claims that certain prejudicial words have been adopted in the social 'war on drugs', and offers a list of friendlier, non-stigmatising words to replace them. Such wording, it claims, will allow substance users to retain their positive self-image and help the public to understand that this is a medical condition like any other. Examples of stigmatising words and phrases and the alternative preferred terms include replacing 'clean' and 'dirty' drug laboratory results with 'negative' and 'positive', 'addiction' with 'substance dependence', and 'recovering addict' with 'addiction survivor'. Rather than reducing a person to an 'addict', these more positive terms look at him or her as a whole person and do not permanently label him or her simply according to his or her illness. Additionally, judgmental terms disregard the 'addictive' nature of drugs and genetic and environmental factors and attribute culpability totally to the 'addict'.

Similarly, the New Zealand Drug Foundation (2010) points out that the stigma associated with the word 'addict' may hobble the rest of that person's identity because it carries such

negative notions. Since recovery from drugs focuses on a person's strengths, identifying someone by their weakness is negative. The Drug Foundation suggests neutral words for 'addiction' such as 'people with substance dependence' or 'people with addiction'.

While the Diagnostic and Statistical Manual of Mental Disorders-4 (DSM-4), released by the American Psychiatric Association (APA) in 1994, made a distinction between 'substance abuse' and 'substance dependence' according to the severity of the symptoms ('abuse' being generally either mild or moderate while 'dependence' is generally severe), DSM-5 (APA, 2013), released in mid-2013, combines these into one category, 'substance use disorder', using a continuum to measure the symptoms from mild to severe (APA, 2014; DSM-5, 2014).

This thesis uses the less stigmatising terms 'rehabilitation graduate substance users' for 'ex/recovering/recovered addicts', 'resident rehabilitating substance users' for those undergoing rehabilitation at one of the Freedom Programme's facilities, and 'active substance users' for active users on the streets who are interacting with outreach peers from the Freedom Programme.

Through my experience with the Freedom Drugs and HIV Programme, explained later in detail, I have come into meaningful and sustained contact with a large spectrum of substance users, MARPs and PLHIV. The Narcotics Anonymous (NA) 12-step substance abuse recovery programme (2008) suggests that a substance user should attend NA meetings during recovery, draw upon a supervisor to avoid relapse and continue the programme until he or she finishes the twelve steps. In the last step the rehabilitating substance user is supposed to carry his or her experience and the recovery message to other active substance users. A rehabilitation graduate substance user is advised to continue to attend the weekly NA support group meetings, which are available worldwide, throughout his or her life. Even after many years of recovery a person still introduces him- or herself as an 'addict' at these meetings and there is a continuous programme called Just for Today (Narcotics Anonymous, 2009) for rehabilitation graduates. Many eminent Egyptian psychiatrists claim that 'once an addict, always an addict', due to the high relapse rate. This is stated without the slightest prejudice but with empathy for and understanding of people with a substance use disorder.

Guidelines have been developed by UNAIDS on the preferred neutral, non-stigmatising and non-humiliating terminology that should be used while working in HIV prevention, e.g. 'female commercial sex workers' instead of 'prostitutes', 'people living with HIV'

instead of ‘AIDS patients’ and ‘men having sex with men’ instead of ‘homosexuals’ (UNAIDS Terminology Guidelines, 2012).

Most of the respondents in this research were in their mid-twenties, with a few cases aged up to the early 50s. Those aged 20 to 40 are referred to here as ‘young adults’, those of 16 to 24 as ‘youths’, and those of 16 to 40 as ‘young people’. The main terms used here are ‘young people’ and ‘youths’, as these represent most of the sample.

1.6. Choosing the topic for research and the external supervisor

I had been volunteering with substance users from the mid-1990s to 2003 with another drug rehabilitation programme until the summer of 2003, when I was invited by Dr Ehab el Kharrat, founder and president of the Freedom Drugs and HIV Programme and later my external supervisor, to lecture on hepatitis C and B as part of the Freedom Programme’s training courses and workshops.

Dr El Kharrat was my supervisor as a senior regional advisor at UNDP-HARPAS, and I had worked with him closely as his research assistant. I had experienced his skill at mobilising communities, putting policies forward and networking with various stakeholders and policymakers from different spectra at first hand. Dr. El Kharrat was highly effective at raising funds for various aspects of the pioneer programme in Egypt and the Middle East. As an imminent psychiatrist and addictionologist, he also headed the first NGO to defend the human rights of men who have sex with men (MSM) and PLHIV. He was elected senator of the last *Shoura* Council (upper chamber of parliament) and became head of its human rights committee. His networking ability showed great resourcefulness and was highly valuable in the extensive expansion of the Freedom Programme. As the largest programme in the Arab world, at any point in time there are at least 500 rehabilitating resident clients at its facilities in addition to its rehabilitation graduates, many of whom go on to become staff within the programme’s hierarchy. The diversity of the clients is vast, as are the activities of the programme. In addition to its direct work with substance users, the programme also holds national and international qualifying and training courses which are accredited by the NET Institute in the USA. NET, an American centre for addiction and recovery education, and the UK based International Substance Abuse and Addiction Coalition (ISAAC) both monitor the Freedom Programme’s training course syllabus, ensure its validity and reliability and grant the graduation certificates. Testimonials from rehabilitated clients, many of whom

had previously sought rehabilitation unsuccessfully through other channels, state that they have undergone a real transformation in their lives through this programme.

Figure 1.1, below, shows three concentric circles, the outer circle representing the hostile world for substance users, MARPs and PLHIV; the middle circle representing the substance-user subculture within mainstream culture; and the inner circle showing the restabilising anchor of the Freedom Drugs and HIV Programme.

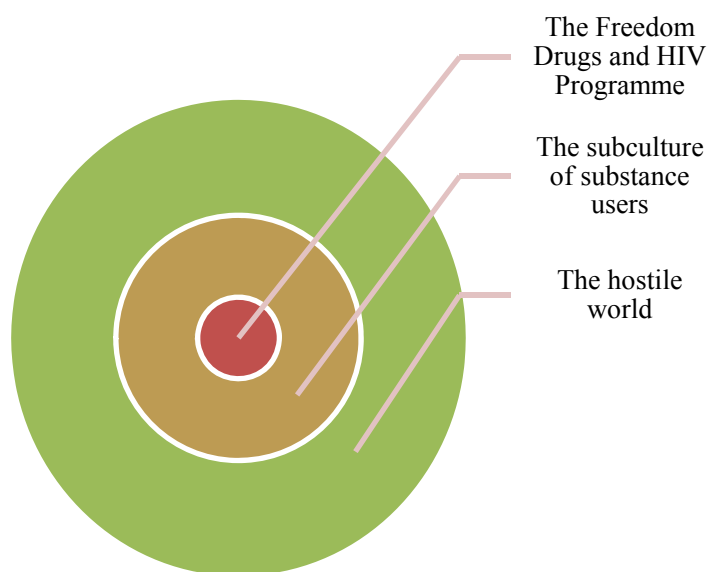


Fig. 1.1: The Freedom Programme, a refuge from the hostile outside world for substance users

1.7. My reflexivity and impressions while conducting the research

1.7.1. The questionnaire survey

All the Freedom Programme staff, regardless of rank in the hierarchy, followed the instructions of Dr El Kharrat in facilitating this research. They secured the times and dates and a quiet and private environment for the sessions, seating the rehabilitating clients in a circle, helping me to distinguish ineligible participants and keeping discipline during sessions. Sometimes staff were noncompliant, absent, or left the whole task to junior staff or to my research facilitator(s) and me. This sometimes led to the prolongation of a session due to noise, interruption or distractions.

The staff were all rehabilitation graduates. Their supervision of the resident rehabilitating clients varied. Generally it was smooth; however in the girls' centre the centre manager's leadership was weaker than that of the two supervisors, who took control and formed a team against her until finally she was compelled to leave the programme. This conflict led to some confusion more than once with arranging dates for my visits to the centre.

My own and my research facilitators' perceptions of the centre managers, supervisors and rehabilitating residing clients varied. The length of time we needed to break the ice and gain a reasonable amount of trust that would allow clients to open up to us and participate in the KAP survey about BBVs/STIs varied, but once I had earned their trust they even consulted me about their diseases after the sessions. As part of my contribution to the resident volunteer rehabilitating clients I always felt the urge to discuss the right answers to the questions in the questionnaire after the sessions, to give them important information that was vital to their protection, rehabilitation and well-being. I felt indebted to do so by my sense of responsibility and as part of courteously repaying them for their time, and they, the staff and the research facilitator(s) greatly appreciated this.

Sometimes the resident rehabilitating clients knew that guests were coming to meet them at the rehabilitation centre and sometimes they did not. They were supposed to follow their supervisors' instructions and schedule for the day, and accordingly they initially gathered as directed. However, they later realised that they were free to choose whether they wanted to participate or not, and to quit at any time if they felt uncomfortable, although very few of them did so. Initially when they found out that Dr El Kharrat was the external supervisor for the thesis and that I was a medical doctor and a volunteer on the programme they felt somewhat indebted by courtesy to sit down and participate. Their staff supervisors (rehabilitation graduates) often set them a good example by sitting down for an hour with them and carefully reading the instructions before filling in the questionnaire.

Many of the active substance users on the streets who had been recruited by the outreach sector, and who were not Freedom Programme residents but attended weekly events there such as support groups, were still on drugs on the streets and some were contemplating quitting. These substance users had been introduced to me through the snowballing method by their outreach peers, who asked me to reward them financially for bringing them in as most of them suffered financial problems, especially the women.

1.7.2. Qualitative methods

1.7.2.1. The pilot study

I asked Dr El Kharrat to help me to recruit substance users to interview. He recommended three rehabilitation graduate staff members from the top of the hierarchy at the Freedom Programme, each with a long experience of substance use and recovery. They were used to giving their testimonials in public and hence did not mind being audio-recorded or expect compensation. Although Dr El Kharrat made it clear that it was not necessary to compensate them, I did offer each a simple key chain as a small token of my appreciation.

Although I already knew one participant before the in-depth interview (IDI), I did not reveal that I knew anything about his past to avoid embarrassing either of us. My research facilitator and I purposefully conducted the sessions with a low profile, and this encouraged the substance users to participate more fully. Even so, I came to agree with workers in this field who say that working with substance users, and especially active substance users, is often exhausting, disappointing and frustrating, and sometimes devastating.

1.7.2.2. The two main studies

I anticipated difficulties with the data collection and analysis due to my medical background and positivist framework of thinking and analysis, which has long been built into my medical practice and work. I have been trained to think that the aim of science is to adhere only to what can be measured, and that knowledge of anything beyond this is unobtainable. Since we could not measure emotions and thoughts, this mindset influenced my processes for collecting data from the IDIs and focus group discussions (FGDs) and its analysis, perhaps causing me to probe deeper, using many techniques, until I was able to reach a tangible impression or experience. Larrain (1979) explains that ‘positivism is a philosophy of science which states that there is only valid knowledge (truth) in scientific knowledge’.

Because I already knew and had a good relationship with some rehabilitation graduates and experts before the research began, I anticipated that the FGDs and particularly the IDIs would be smooth, frank, highly reflective and rich. After Dr El Kharrat allowed me to attend a gastroenterology clinic at the Freedom Programme’s headquarters I became better known there and was endorsed as a figure on the higher rungs of the hierarchy. While this gained me more respect from rehabilitation graduates and active substance users gathered via the outreach programme, it also drew me closer to them and

strengthened my relationship with the administration. To decrease any potential bias, I tried not to include any substance users or MARPs that I had known beforehand in the FGDs. This all ultimately contributed to the assemblage of knowledge by positioning me to learn the best prevention techniques from the perspectives of the substance users, and of the policy/opinion-makers who were instrumental in their welfare.

- **Focus group discussion with male substance users living with HIV/AIDS**

I contacted the head of the PLHIV and MSM project at the Freedom Programme to ask him to help me to recruit eight to ten male PLHIV who were substance users. He referred me to two PLHIV who were outreach peers, and they in turn invited PLHIV who attended the weekly Freedom Programme support group. I had met a few of them before at the programme's clinic at lectures I had given, or at conferences. They met me once a month at their support group, where we discussed positive living with HIV/AIDS and all medical matters related to the disease. They were happy to attend the FGD, in part out of gratitude for my efforts and in part for monetary compensation. As the FGD lasted about two hours I tried to persuade the participants to accept refreshments or prepaid mobile phone cards, but as they insisted on monetary compensation each received 4 GBP plus refreshments at the end of the session.

Some participants tried to cheat by snowballing (see Methods chapter) individuals who did not fit our inclusion criteria, such as those who were only substance users or only PLHIV. However, a simple enquiry was enough to tell the difference. After the exclusions there were finally seven participants. This group had shared most of their life experiences and did not disagree amongst themselves except on a few occasions. However, their interaction was so loud that at times I had to ask them not to interrupt each other so I could hear them, and for the sake of the audio-recording for later transcription.

At the beginning the participants were sceptical, but with the presence of their outreach peers and my detailed explanation of the nature of the study and guarantee of confidentiality and anonymity they gradually relaxed. I made sure that we kept our professional attitude and distance. We showed respect and a nonjudgmental attitude, which boosted their trust in us; because of the enacted cultural stigma they were sensitive to the slightest notion of depreciation or prejudice. As the session went on, two participants, who were silent most of the time, gradually opened up to my encouragement and probing. It was clear that the participants needed to talk to someone who could listen. A few were on the verge of tears as they complained of S&D from their families and painful prison experiences without having committed any crime. It was not easy to make

sure that everybody spoke, or to prevent the stronger or louder voices dominating the weak and the timid. However I did not face this in the women's FGDs because their social role requires them to be quieter, and there were fewer of them.

- **Focus group discussion with male substance users who have sex with men**

Arranging this FGD was relatively easy as we followed the same procedures as for the PLHIV. The head of the MSM and PLHIV project at the Freedom Programme referred me to two MSM rehabilitation graduate substance users who worked as outreach peers. At the time of the FGD we ended up with MSM who were nine substance users after the exclusions, in spite of some of trying to cheat by snowballing in peers who did not fit our inclusion criteria. I tried to persuade them to accept refreshments or simple gifts instead of monetary compensation, but due to their poor financial situation, mostly due to S&D, they insisted on 5 GBP per hour each. Their outreach peers required more money for their coordination and snowballing, and the participants who had recruited other substance users were also rewarded both for participating and for helping to bring others in.

The MSM participants were suspicious at first, but holding the FGD at the headquarters of the Freedom Programme with their supervisors attending added credibility. They gradually came to trust my research facilitators and me after the usual proper introductions, signing the informed consent form about voluntary participation and receiving our assurance of confidentiality and anonymity. After a short time they forgot about the audio-recording and the female research facilitator and interacted, agreeing and disagreeing many times, sometimes loudly. This FGD was the most vibrant and challenging of them all.

- **Focus group discussion with female intravenous drug users**

I tried to recruit female intravenous drug users (IVDUs: I also use this abbreviation for intravenous drug use) through the outreach sector at the Freedom Programme. However, it was hard to find six to eight who were both available and substance-free. Female IVDUs who are willing to speak out and disclose their experiences are rare given the intense enacted stigma, which causes most to shy away. After a few failed trials I resorted again to Dr El Kharrat, who referred me to a sector director and in turn to his subordinates. A female supervisor at the women's rehabilitation centre helped me to arrange this meeting. There were supposed to be seven in this group, but two were sick and we ended up with only five. We did not have to compensate them with money because they followed the rules of the rehabilitation centre that prohibited this. However, in response to their trust

in me I offered them a sex education lecture followed by free rapid HIV, HCV, HBV and STI testing.

The female IVDUs were rather sensitive; they told me they had participated in a similar session before and their confidentiality had been breached by the interviewers. Since substance users form a somewhat closed community this had caused a scandal, and the women took quite some time over reading the introductory form and informed consent form, asking questions before they finally signed.

In this particular FGD, since the resident substance users were still under rehabilitation I allowed the participants to smoke, as smoking for them is a relief and an escape from tension. Four of them loosened up, and as I felt resistance at the beginning I relied on one outgoing IVDU to answer the first three or four questions to break the ice, which encouraged the others to participate. However, the fifth IVDU said that she would only watch. I was considering letting her go and cancelling her form. Luckily I did not do this, as when she eventually decided to participate she was the most focused and intellectual participant. Obviously she had needed more time to get to trust us and see what was going on. Another participant, a rehabilitation graduate substance user who had relapsed after five years of recovery, was running a girls' rehabilitation centre herself. As she was back at this rehabilitation centre working in a relapse rehabilitation programme, treating her the same as the others was slightly awkward. Many times these women and girls stared at me, watching my facial expressions and body language as I reacted to what they had just shared. I always tried to keep a neutral and professional friendly face. This group had some controversial opinions, but they were not very strong.

- **Focus group discussion with substance users who were female commercial sex workers**

When I started setting up this FGD I contacted the head of the Abused Woman project at the Freedom Programme to ask her to help me recruit eight to ten substance users who were female commercial sex workers (FCSWs) from their project. She claimed that it would be difficult to gather such a number because the FCSWs needed to be substance-free for two hours for the discussion, which was not easy for them. I was hoping not to offer the women money but only refreshments and simple gifts in return for their participation, which made the recruitment process even harder. Finally I resorted to a female supervisor of the female rehabilitating substance users in the programme and informed her that I would rather not give participants a token of appreciation exceeding 5 GBP. The supervisor replied that the FCSWs would not accept this, as each could easily

make 20-30 GBP for 30 minutes of commercial sex. At last they settled on 20 GBP each for the two-hour session. By then the January Revolution of 2011 had erupted in Egypt and some FCSWs were afraid to leave home, fearing that they might be randomly arrested or attacked due to the breakdown of law and order. Three others backed out at the last minute, suspecting a trap, so we were left with only three who were so nervous that they had to smoke a couple of hashish cigarettes to loosen up in the taxi to the Freedom Programme's headquarters. They would not have come without their female substance use supervisor, who picked them up one by one in the taxi. Since she knew the taxi driver he did not much mind the women smoking hashish.

In the FGD they were initially nervous, but after I introduced myself and the research facilitator and assured them of our respect and their confidentiality and anonymity they relaxed and participated enthusiastically. One was Christian, and the other two were Muslims who had been accustomed to going out together seeking commercial sex and shared their life responsibilities; however one of them had been raped by a male client and was traumatised, and since then had stayed at home, so the other provided for them both. All the FCSWs smoked hashish and marijuana and took narcotic pills, but did not inject intravenously. The Christian FCSW had been rehabilitated from drugs and commercial sex, had relapsed and then recovered again. She came from an above-average family, as was clear from her attire, the way she talked and what her supervisor had told me before the FGD, and she took on the leadership of this mini-FGD, encouraging the other participants to share more. The father figure for each of them was distorted because of how their fathers and brothers had used them and beat them to force them into commercial sex to provide for the family, while simultaneously despising them. The participants agreed on most issues.

1.8. Summary of the thesis

Chapter 1 has provided an overview of how Egypt's culture impacts on substance use, unsafe sex and unsafe substance use, and especially the use of intravenous drugs, which heightens the risk of infection with BBVs/STIs considerably. This was followed by my positionality in the rehabilitation programme hosting the research, my reflections on the research, the research tools used, the objectives of research and the rationale for choosing the research location in Egypt.

In Chapter 2 I discuss the Egyptian context and the research location: the Egyptian Freedom Drugs and HIV Programme. Chapter 3 discusses published research on the

epidemiology and risk of infection by BBVs and STIs; risk behaviours and their relation to such infection; gender and sexuality; assesses how religion influences this entire realm of human activity in Middle Eastern societies; and discusses stigmatisation and discrimination. Chapter 4 describes the quantitative and qualitative methods used for this research and Chapters 5 and 6 report the quantitative and qualitative findings and results. In Chapter 7 I discuss the results of this research and compare and contrast them to those of other studies; identify my contribution to knowledge as well as the strengths and weaknesses of my research; and finally recommend preventative techniques that could be adopted in Egypt to help substance users to protect themselves from BBV/STI infection. The recommendations are in keeping with the cultural and social norms of both the substance users and the decision-makers who work with drugs, HIV and AIDS in Egyptian society, which is predominantly Muslim, male-dominated, conservative, traditional and religious.

2. The Egyptian context and research location

Chapter 2 presents an overview of the cultural and political context of this research. It also discusses the Freedom Drugs and HIV Programme in detail. The epidemiology of HIV, HBV and HCV viruses and STIs in Egypt and across the MENA region and the world are covered in Chapter 3.

2.1. Culture and risks of infection by blood-borne viruses and sexually-transmitted infections, particularly HIV

2.1.1. The Arab Spring in the Middle East and North Africa, and its repercussions

The Arab world in MENA is the cradle of three religions: Judaism, Christianity and Islam. None of these three groups are homogeneous. Jews are generally Orthodox, Reformed or Liberal; Christians are generally Orthodox, Catholic or Protestant, while Muslims are Sunni or Shiite. The Arab world is religion-bound, and religion influences every aspect of daily life and the social and cultural norms. Over the past three decades sectarian tension in Egypt particularly has accentuated societal heterogeneity. Furthermore the political unrest in Egypt and other Arab countries since January 2011, known as the Arab Spring, has all but devastated the structure of the Arab world.

According to Maziak (2009), no Arab country is devoid of political tension, foreign intervention or the threat of terrorism. Ongoing instability and the failure of governments to enforce law and order are tearing the fabric of Arab communities apart. The Arab regime's security depends primarily on its people's loyalty. Foreign interference in the name of democracy has been imposed on Arab communities from the outside, making the region more unstable and allowing opposition groups to gain more power and control by characterising the outside intervention as an imposition on the rights of the Arab peoples. In this way, what Maziak calls the 'voiceless majorities' are those who are most devastated, 'the victims', while minority oppositions gain power. This scenario has led to the collapse of several Arab countries in what Maziak calls a 'domino-like breakdown', with serious consequences for the world's power balance.

2.1.2 The Egyptian context

2.1.2.1. Geography

Figure 2.1 shows the continent of Africa and the position of Egypt within it. Figure 2.2 shows that Upper Egypt extends from the Sudan in the south up to Cairo in the north and Lower Egypt extends from Cairo down to the Mediterranean coast in the north. The Western (Libyan) desert lies between the Nile valley and Libya to the west, and the Eastern desert lies between the Nile valley and the Red Sea coast in the east. Sinai lies in the north-east between the Suez Canal to the west and the Israeli border to the east.



Fig. 2.1: Egypt within Africa (World Atlas, 2010) **Fig. 2.2: Egypt (CIA World Factbook, 2008)**

2.1.2.2. Historical background

A Pharaonic kingdom first existed as a united kingdom around 3200 B.C., and for the next 3000 years a series of dynasties ruled ancient Egypt. The last dynasty was conquered by the Persians in 341 B.C. and was succeeded by the Greeks, the Romans and then the Byzantines (Greek Orthodox), before the Arab Muslim invasion in 642 A.D. Around 1250 A.D. the Mamluks (military slaves) took over. In 1517 A.D. the Ottomans invaded Egypt, and after the French retreated in 1801, Mohamed Ali, an Ottoman military leader, ruled autonomously before passing on the rule to his sons and grandsons, who held it for the next 150 years. The Suez Canal was built in 1869 and became a major international transportation route. As a result, in 1882 Britain was able to invade Egypt. The Ottoman Empire was dissolved in 1914 and Egypt became totally independent in 1954. The Aswan High Dam on the River Nile in the most southern part of Egypt was completed in 1971. The creation of Lake Nasser behind the dam initiated a quantum leap in agricultural and

ecological life. However, the fastest-growing and largest population in the Arab world reduced the amount of land suitable for agriculture over time and augmented dependence on the Nile, wasting resources and making Egyptian society suffer. Successive governments have not successfully managed to satisfy the demands of the rapidly-growing population by reforming the economy or investing the required amount in providing services such as communications or infrastructure. In January 2011 Egyptian opposition parties led country-wide demonstrations and strikes inspired by the Tunisian Revolution a few months earlier, bringing the end of Mubarak's regime. The Supreme Council of Armed Forces ruled temporarily until the election of a new parliament in 2012, when Morsi was elected, who in July 2013 was himself ousted (CIA World Factbook, 2013).

2.1.2.3. Demographic considerations

The majority of Muslim Egyptians are Sunnis, with a very small hidden Shiite minority. It is against the Egyptian constitution for Egyptian Muslims to be anything other than Sunni. Intra-Muslim sectarian tension between the Sunni majority and the Shiite minority is growing: Shiites are hated and prosecuted by the state, and many people view them as heretics. The violence has been escalating, with four Shiites savagely killed and their homes and properties burnt down after the 2011 revolution.

Most of Egypt's population lives within the Nile Delta area in Lower Egypt, and most Christians live in Upper Egypt. The birth rate in the Muslim community is higher than that in the Christian community because the Qur'an teaches that the more children Muslims have, the more the Prophet Mohamed will be proud of them on the day of the resurrection. Christians in Egypt, however, generally have one or two children. When free intrauterine loops (IUDs) for family planning were first introduced to Egypt through the United States Agency for International Development (USAID) in the 1970s, Muslims were suspicious, thinking that the West was trying to reduce Muslim numbers in the world.

The CIA's World Factbook (2014) states that the population of Egypt is 86,895,099. Egyptians comprise 99.6% of the population and other ethnic groups about 0.4% (2006 census). The Muslims are predominantly Sunni, and comprise 90% of Egyptians, while Christians (primarily Coptic Orthodox with smaller numbers of Catholics and Protestants) make up the other 10%. The population growth rate is 1.84% and the average fertility rate of an Egyptian woman is 2.87 (ibid).

The urban population makes up less than half of the total. Those aged 0-14 comprise 32.1% of the population; 15-24, 17.8%; 25-54, 38.4%; 55-64 years, 6.7%; and 65 and over, 4.8%. The adult HIV prevalence rate is 0.1%, ranking Egypt 136th in the world. Unemployment among youths (aged 15-24) stands at 24.8% (14.7% for males and 54.1% for females). School-life expectancy in primary to tertiary education is up to 13 years of age for both males and females (CIA World Factbook, 2013).

The Arab Human Development Report (2010) states that about a quarter of Egypt's population is aged 18-29 and that their wellbeing affects all of Egypt. However, their opportunities are not as promising as those of the previous generations, who benefited from a thriving job market in the 1970s and 1980s. Recently, with little or no educational reform, and failure to control population inflation, there has been a drastic decline in salaries in both the public and the private sector. This has caused prolonged unemployment and greater dependency on the family and the state. The social breakdown and exclusion of youth takes the form of unemployment, crime and substance use. This is augmented by gender segregation, as well as by various cultural and religious restraints. There is a fear that due to this exclusion, desperate and unhappy young people are easy for Muslim fundamentalist groups to targeted.

2.1.2.4. Sectarian tension

Fundamentalist Muslim groups have long persecuted the Christian minority, who are accused of being 'worshippers of the crucifix' and 'idol worshippers' because many Christians use the cross and saints' pictures and statues in their rituals. The law in Egypt does not recognise its citizens' right to choose to be atheist, agnostic or pagan. Generally all Christians are called Copts, from *Egyptos*, the Greek word for Egyptian. During the past 1400 years or more of the mutual existence of Muslims and Christians the persecution and prosecution of Copts has fluctuated. The persecution of the Christian minority escalated during Hosny Mubarak's regime and has boomed since the revolution. Christians are violently attacked, kidnapped for ransom or, reportedly, forced to convert to Islam. Christian churches, monasteries and properties were stormed, torched, vandalised and looted after Morsi was deposed. The ousted Muslim Brotherhood (MB), supported by violent fundamentalist Islamic groups, has been using violence against weaker minorities to demonstrate its anger against the army and the government that removed it. This has forced many Christians to flee Egypt for countries such as the USA, Canada and Australia. For decades, Muslims in Egypt have been becoming more fundamentalist under the influence of the *Wahhabis*, followers of a fundamentalist Sunni

ideology originating in Saudi Arabia, adopting their clothing and culture and giving their children Saudi names. It was originally expected that the higher socio-economic classes in Egypt would reject this fundamentalism because they had become more open and liberal due to Western influences; however, high status has had no influence on the progress of fundamentalism.

With regard to Muslim-Christian relations in Egypt in the wake of the Arab Spring, an article by Rowe (2013) in the *Digest of Middle Eastern Studies* reports that many Copts participated in the protests that led to the end of Mubarak's regime in February 2011. While the regime had held a stable elite partnership with the Pope of the Coptic Orthodox Church, the 2011 revolution revealed the erosion of this partnership. The increasing public role of lay movements among Copts, the death of the former Coptic Pope and his replacement by a younger successor reinforced the rise of this lay Copts movement.

However, Release International (2014) reports that Copts have feared for their lives since the overthrow of the MB president Morsi. In early September 2013, Christian churches, monasteries, houses, bookshops, schools and businesses were attacked by pro-Morsi Islamists. A large number of Christians were killed on that day, which was described by eminent scholars as the 'worst single day of violence against Christians since the 14th century'. Morsi's supporters made the Christians the scapegoats for his overthrow and declared that these attacks would only stop when he was returned to power.

According to Mahmood (2012), Egypt continues to experience the sectarian tension and violence between Muslims and Copts sparked by the ousting of Mubarak in 2011. The major flashpoints of this conflict are interreligious marriage and conversion, hated issues which inflame passion in both communities.

Boles' article 'Egypt – Persecution: Disappearing Christians of the Middle East' in *Middle East Quarterly* (2001) notes that while the majority of Christian Copts live in Upper Egypt they also exist in large numbers in big cities and towns such as Cairo and Alexandria and span various socio-economic classes, with a considerable number in the upper and middle classes because they are interested in education. It cites personal interviews with Coptic religious and civil rights leaders in the Diaspora, who report that as a minority in constant danger, Egypt's Christian Copts are vulnerable to strong pressure that is leading to a decrease in their numbers. Thousands have emigrated; however, no official numbers for them in the diaspora are available. Some sources claim that there are around two million Copts living in Europe, the UK and New World countries such as Canada, the US and Australia. Boles cites the London Jubilee Campaign's (1994)

Stranglehold on Egypt's Christians, which claims that every year thousands of the Copts remaining in Egypt convert to Islam due to persecution, as for instance 50,000 Coptic university graduates did in 1988–1990, while those who hold on to Christianity are increasingly ‘marginalised and alienated in their own country’. The article also cites the Institute for Religious Minorities in the Islamic World (1993), which reports that an earlier period of ‘dark’ sectarian tension between Muslims and Copts continued for two decades, ending with the 1952 revolution only to re-emerge rapidly in 1972 when anti-Coptic rioters destroyed the homes and shops of local Christians in a Nile Delta town.

2.1.2.5. Marriage and the vulnerability of youth and female adolescents

Many young people cannot afford a traditional marriage due to the high cost, so they resort to semi-legal forms of cohabitation that are frowned upon by society. One of these is *Urfi*, an unregistered, secret, nonbinding and volatile Muslim marriage, usually involving the young man and woman writing that they are now married on a piece of paper signed by two of their friends as witnesses. *Urfi* is frowned upon by most Muslim scholars but has been experiencing a boom, most typically among Muslims, but also among Muslim-Christian mixed partnerships and Christians themselves. Since these unstable marriages have a high breakdown rate, the practice is thought to expose the younger population to the risk of contracting various BBVs/STIs. Furthermore, because the formal marriage age has increased for both sexes, many people resort to premarital heterosexual, same-sex or bisexual relationships. With the current economic crisis, and particularly since the revolution in 2011, the rule of the MB and the subsequent instability caused by its overthrow have led to personal financial problems becoming a major issue. They result in partners separating, divorcing, remarrying, and resorting to extra-marital sex or remaining single after divorce, further exposing young people to a high risk of infection by BBVs/STIs. Worse still, youth are not offered a proper sex education due to the general Egyptian taboo related to sex and drugs.

Another important factor that has increased in the last decade, and particularly since the revolution in 2011, is Arab Gulf men marrying young Egyptian women and girls. Many of these men are rich, old and polygamous, and have multiple sex partners. They impress poor rural Egyptian families with large dowries, gifts and monthly stipends for the whole family so that they can marry their pretty and generally naïve daughters, who are mostly adolescent and sometimes even under the age of 12. The groom may spend a few weeks or months with his young bride but the marriage may be over by the end of the same summer. These are *Misyar* or *Mutah* marriages, other types of semi-legal, volatile, secret

Muslim marriage, and very few last longer than a few months. Some of these women can drift into commercial sex and/or substance use after being divorced, having become used to a high income during their brief marital state. This places them at risk of infection with BBVs/STIs and of infecting their clients. Many remarry and have normal families; however, in some cases they do not realise that they have contracted a BBV/STI from their Arab Gulf ex-husband and transmit the infection to their new husband. In some cases even when the infected wife knows of her seropositivity she does not dare to reveal it for fear of punishment and disgrace (see the qualitative results and the next three points below for references).

- **Early marriage in Arab countries**

Rashad, Osman and Roudi-Fahimi point out in the Population Reference Bureau report (2005) that traditional cultural values around family honour and girls' virginity have a dramatic effect on Arab families' decision to marry their daughters at a young age.

Early marriage violates the human rights of children as it isolates them, leaving them with little education and few of the skills necessary for their development. It eventually renders them poor and vulnerable to gender inequality, and hence also vulnerable health-wise (UNIFEM, 2007a). According to the article by Otoo-Oyorty and Pobi in *The Forum on Marriage and the Rights of Women and Girls* (2003), other reasons for early marriage can be conflict, poverty and illiteracy. Early marriage usually leads to early childbearing with a high rate of fertility, both of which jeopardise the health of young girls and their babies (UNFPA, 2005). The younger the bride, the more significant the age difference between her and her husband and the lower her chance of negotiating her healthcare with him, according to the World Health Organization (WHO) (2003).

- **The marriage problem in Egypt and the Arab world**

In her book *Sex and The Citadel* (2014) El Feki argues that in the Arab world sexual attitudes and behaviours are intensely intermingled with 'religion, tradition, culture, politics and economics'. Women's social value lies in marriage and motherhood, regardless of how much they might have achieved independently in their lives, even if they previously worked professionally. The author cites an Egyptian proverb: 'The shade of a man is better than the shade of a wall'. In the past few years spinsterhood has become a popular topic in the media on TV, blog sites and social media groups and in popular books.

The Population Reference Bureau (2013) reports that one in seven girls in the Arab world marries at under eighteen years of age. The girls' families believe erroneously that this is best for them and do not realise the negative repercussions of early marriage such as dropping out of school, sexual coercion, early pregnancy and vulnerability to domestic violence. Child marriage often leads to long-term complications in a 'vicious cycle of poverty, low education, high fertility and poor health' (ibid). Egypt, with the largest population in the MENA, has the largest number of child brides.

According to a World Bank report (2002), the major problem of marriage in Egypt is its expense, with dowry and *shabka* (gold or jewellery), housing and *gihaz* (furniture and appliances), which should all be new, presented to the bride. The escalating cost of marriage has had severe repercussions on marriage patterns, such as young people resorting to *Urfi* marriages and men marrying rich older women. Shahine, in her article 'The Double Bind' (*Al Ahram Weekly*, 2014) claims that there are thousands of cases of *Urfi* marriage between young men and young female students at Egyptian universities.

- **Non-traditional marriage patterns in the Arab world and other Muslim countries**

Al-Krenawi (2014) acknowledges that while the main purpose of a traditional classic Islamic marriage is long-term living together, giving birth to children and the fulfilment of psychological and physical needs, there are various alternative temporary and volatile marriage patterns, e.g. *Urfi*, *Misyar*, *Badal*, *Hiba* and *Misyaf*.

Arsal (2014) discusses undocumented marriage in Indonesia, a Muslim non-MENA state, as a legal type of Muslim marriage as long as it fulfils the legal requirements for a public announcement of the marriage in front of God and the people; however, it is not registered with the authorities. The wives have no formal standing before the authorities, which makes it hard for them to claim their rights as wives or their rights to any future children. They have little option, however, as their marriage is decided by families and socio-cultural norms. Wives are discriminated against and subordinated, cannot negotiate power relationships within their families and moreover are vulnerable to STIs and cervical cancer.

According to the Population Reference Bureau (PRB) (2012), reproductive health (RH) is pivotal to individuals' health. In Egypt, adolescents, especially girls, are scarcely informed about sexual health due to cultural and religious constraints. Egyptian adolescents often refrain from asking their family, community or professionals for sexual and reproductive health (SRH) information, although their parents are the preferred

source. Hence improving the quality of communication between parents and their adolescent children can protect the latter from behaviour that risks infection by BBVs/STIs. The PRB emphasises the gaps between female adolescents' needs for appropriate SRH information and what they actually receive. The Bureau also reveals that schoolteachers, doctors and social workers are unprepared to respond accurately to girls' queries and concerns. However, both girls and school officials are interested in obtaining this information and closing these gaps. Young women are generally less likely to attend school than young men because a significant number marry young and drop out of school.

Osmani (2012) argues that *Misyar* marriage (marriage of convenience or 'travellers' marriage') is among the new marriage patterns that exist widely in Egypt, Saudi Arabia and Gulf. The *Misyar* bride sacrifices some of her marital rights, e.g. to residence, expenses and any designated duration. While some Muslim scholars vigorously support this form of marriage as it could reduce the number of unmarried women, others fiercely oppose it, as wives can be considered only part-time or temporary, a concept that is not deeply rooted in Islam.

Imtoul and Hussein (2009) argue that typically the cultural discourses advocate that girls should preserve their virginity and stay celibate and that women should willingly refrain from extramarital sexual relationships, choosing the right and virtuous path. The authors claim that this in turn denies women and girls the fulfilment of their sexual desire. In the past few decades the age of marriage in Muslim countries has risen to the late 20s and beyond, and the increasing rate of divorce has created many more single women. Social change and traditional attitudes towards female sexuality, e.g. the desirability of virginity, have led to an increase in the number of women who have either never had or will no longer have sex.

Mikhail (2002) points out some resemblances between child marriage and child prostitution in MENA. Both involve economic issues, lack of freedom and the violation of children's right to consent to early marriage, which was frequently augmented by their vulnerability to certain socioeconomic factors, rendering their options in life few.

Rashad, Osman and Roudi-Fahimi (2005) argue in the PRB report that while *Urfi* marriage may be religiously acceptable with parental approval and a public declaration, it is perceived as a 'cover for pre-marital sex' from the perspective of Islam, the public and the judiciary system. Yet it is still practiced in rural areas when the bride-to-be is below the legal age of marriage, which is 18, and the family would have to wait until their daughters reach that age to register a formal classic marriage. Other patterns of non-

traditional and volatile marriage include *Mutah* and *Misyar* marriages, which are generally practiced by polygamous men to add legitimacy to their sexual relationships; the former is widely practiced by the Shiites in the south of Lebanon and the latter is prevalent in the Arabian Gulf states. In a *Mutah* marriage the bride and the groom have to specify a termination date for the marriage. In a *Misyar* marriage the groom does not provide a household and is not financially responsible for his bride, unlike in a classic abiding marriage.

2.1.2.6. Tourism and the vulnerability of youth

Another way in which Egyptian youth risk infection by BBVs/STIs is via Arab tourists spending the summer in Egypt. For many decades Arab men have travelled to the area to use Egyptian FCSWs due to the lenient laws in Egypt. Recently a new form of commercial sex has developed, with such tourists arriving in the summer months to meet male commercial sex workers (MCSWs) who offer their services primarily to gay Arab men and sometimes to Arab women who visit Egypt and then return to their normal lives until the following summer. Again, due to the deteriorating Egyptian economy the government has tried for the last three decades to maintain good relations with the rich Arab Gulf countries, and therefore these visitors from the Gulf are allowed to violate the rules, laws and conditions of Egyptian society. The police and legal system generally choose to ignore their behaviour and do not react as they would with an Egyptian national. Moreover, a large proportion of Egyptian society lives in poverty and it is well known that anything and anybody, including a government official, may be bought for the right price.

2.1.2.7. Constraints imposed by the Muslim Brotherhood and the *Salafis*

Religious institutions in Egypt are strict. The MB and other *Salafi* (fundamentalist Sunni) groups have tried to impose *Shariah* (Qur'anic law) in the country, with serious repercussions on the day-to-day life of all Egyptians, particularly Christians. Religious leaders enjoy a great deal of respect due to the conservative nature of the culture. Most are prejudiced against substance users and other MARPs; however some prominent tolerant and enlightened religious figures have attempted to respond to the UN and other concerned CSOs' invitations to bring about change. The late Coptic Orthodox Pope Shenouda III and the late Grand Al Azhar Mosque Imam Tantawi both sent delegates to conferences and workshops to support the joint efforts of organisations working to curb the spread of HIV.

During the Islamic rule of Egypt under the MB and their effort, with the *Salafis*, to apply Shariah Law and Islamise all aspects of Egyptian life, the Egyptian people anticipated that manners, ethics and principles based on this heightened religious influence would improve in the country. This was not the case, however, and nothing changed with regard to how the government treated people, particularly substance users and MARPs. In fact there was rapid deterioration in all areas of life. The Egyptians expected the MB to close down the country's national and private breweries and wineries and nightclubs, discotheques and casinos, but, paradoxically, it renewed the licenses for these places for even longer than before. Such mixed-message governance and the eventual overall failure of the Morsi/MB government not only left much of Egyptian society reeling but also hit Egypt's most vulnerable sub-groups the hardest.

2.1.2.8. The vulnerability of women and people living with HIV

The Population Reference Bureau (2012) reports data on the health and socioeconomic well-being of young Egyptian people collected by the Population Council in 2009 and what it calls their 'boiling frustration'. The unemployment rate among youth is much higher than the national average. At least 90% of the unemployed in Egypt are youth and constitute about one third of the population. Thus it is understandable that they, and particularly two extremely marginalised sub-group, young Egyptian women and PLHIV, demand a change in the status quo in post-revolution Egypt. The over 11 million young women in Egypt are the largest marginalised group compared to PLHIV, the smallest and most stigmatised group. Frustrated young Egyptians demanded dignity throughout the country's revolution, yet of the people on the margins of Egyptian society, PLHIV are afforded the least.

2.2. Prevention of HIV and other blood-borne viruses in Egypt

2.2.1. Reaching the most-at-risk-populations

UNAIDS (2012a) record that in a joint venture, the National AIDS Programme (NAP), Egypt-FHI 360 (an international public health NGO and funding body), and some CSOs have introduced outreach projects to minimise the vulnerability of MARPs, including MSM, FCSWs and IVDUs. These outreach projects offer peer-to-peer outreach and education services which are introduced either directly at drop-in centres or through referral to service facilities for active substance users recruited on the streets via the outreach programmes.

2.2.1.1. Men who have sex with men

UNAIDS (2012a) reports that several national NGOs in Cairo and Alexandria have implemented an MSM outreach project with the technical and financial support of Egypt's MOH-NAP, UNAIDS, the Ford Foundation and USAID. The pilot project was implemented in Cairo between 2009 and 2010 and in Alexandria from late 2010 to the end of 2011. The project has brought together the three field outreach teams, with referrals to medical, legal and psychosocial service providers, and is overseen by a monitoring and evaluation (M&E) system which enables the useful tracking of increases in knowledge and changes in behaviour in the MSM population after the distribution of condoms and lubricants to them. The data collected from Cairo and Alexandria demonstrate positive behavioural change: of 601 MSM in Cairo contacted via the outreach programme, only 30.3% reported using a condom at the last sexual act before the baseline questionnaire, compared to 83.7% in the post-exercise questionnaire six months later. In Alexandria, of 269 MSM gathered via the outreach programme only 37.7% reported condom use at the last sexual act before the baseline questionnaire versus 89.2% in the post-exercise questionnaire six months later. There was also a decrease in the number of self-reported STI infections, from 85 to 30 cases in Cairo and 42 to 5 cases in Alexandria. Additionally, the data demonstrate an increase in the number of MSM undergoing HIV testing, with 23.5% at the baseline and 53.9% six months later in Cairo and, 45% at the baseline and 76.2% six months later in Alexandria, according to UNAIDS (2012a).

El-Sayyed et al. (2008b) screened 73 MSM in Cairo for HIV status and risk behaviour. They found that most had become sexually active at less than 15 years of age and two thirds of the sample took both active and passive roles. Heterosexual relationships were reported by three quarters of older MSM, which might indicate that as they grow older they are more likely to indulge in heterosexual sex. Almost three quarters of younger MSM practiced only gay sex. Condoms were 'always' used by less than a fifth of the sample, and illegal drugs by less than a third. HIV screening revealed that only one seropositive MSM was an MCSW, who reported having multiple partners and usually indulging in receptive anal intercourse (RAI). Globally, many MSM are married or have sex with women.

2.2.1.2. Female commercial sex workers

UNAIDS (2012a) and WHO (2011a) report a background paper about the Al-Shehab Institution for Promotion and Comprehensive Development (caring primarily for FCSWs) that mentions the launching of an outreach and support programme for FCSWs

in 2007. This service is administered through field outreach and referral to a drop-in centre for medical services giving away condoms and providing social and legal services. Another Al-Shehab Institution programme, Alternative Career Options, was launched in 2010. Technical and financial support is provided by NAP, the United Nations Population Fund (UNFPA), UNAIDS, the United Nations Children Fund (UNICEF) and the Drosos Foundation, which funds many MARP outreach projects.

2.2.1.3. Intravenous drug users

The Freedom Drugs and HIV Programme started its project to prevent HIV among IVDUs in 2003; by 2010 almost 4000 IVDUs had been reached. In 2010, another one-year pilot project targeting IVDUs was launched in Alexandria with a drop-in centre providing free rapid HIV testing and giving away condoms and clean syringes. This project is implemented by the Youth Association for Population and Development, a national NGO, with technical and financial support from NAP, the United Nations Office on Drugs and Crime (UNODC), UNAIDS and the European Commission. These outreach activities allow IVDUs to access services through several NGOs that have drop-in centres offering free access to condoms and clean syringes and voluntary confidential counselling and testing (VCCT) (UNAIDS, 2012a).

2.2.2. Voluntary confidential counselling and testing centres

Egypt's NAP data (2011) shows that at the end of 2011, 14 fixed and nine mobile VCCT units existed across the country and at six NGO centres. Overall, women's utilisation of these services remains low; however, it increased between 2010 and 2011.

2.2.3. Liaison between stakeholders

The NAP has partnerships with other ministries and CSOs such as the Freedom Programme working with different MARP sub-groups. This cooperation also exists between NAP and several international organisations, including the UNAIDS Secretariat and other international donors such as the Ford Foundation, according to the Egyptian Ministry of Health's HIV/AIDS Situation, Response and Gap Analysis (2010).

2.2.4. Tackling culturally-based stigma, prejudice and discrimination

UNAIDS (2012a) reports that NAP holds anti-stigma campaigns in different governorates to reduce HIV-related stigma where several training activities are conducted related to HIV surveillance, M&E, prevention of mother-to-child-transmission (PMTCT),

antiretroviral drugs (ARVs), home-based care, clinical care, nursing care, the training of trainers (TOT) and NGO capacity-building. The target population is doctors, nurses, healthcare personnel, social workers, VCCT counsellors, NGOs and NAP staff. NAP also conducts a number of awareness-raising sessions addressing young people, tourism workers, refugees, Ministry of Foreign Affairs and Ministry of Interior leaders, women's leaders, religious leaders, teachers, scouts, street children and prisoners.

As stigma and discrimination appear to be the two biggest obstacles to providing effective HIV prevention and management, media campaigns are needed to increase HIV and AIDS awareness by mobilising influential spokespeople to publically break the silence on many taboos, including HIV, as reported by the Ministry of Health's HIV/AIDS Situation, Response and Gap Analysis (2010)

2.2.5. Controlling sexually-transmitted infections

NAP has 'launched six STI clinics in Cairo, Alexandria and South Sinai, by which STI surveillance has improved' (Ministry of Health's HIV/AIDS Situation, Response and Gap Analysis, 2010).

2.2.6. Strengthening the surveillance system

The Ministry of Health's HIV/AIDS Situation, Response and Gap Analysis (2010) reports that NAP has established 99 sentinel/guarding stations across Egypt including TB clinics, fever hospitals, STIs and drug rehabilitation centres. Although the surveillance systems are limited to MARPs it is mandatory that foreign tourists, expatriots and refugees are tested for HIV. Prisoners, FCSWs, MSM and blood donors are tested without their consent. Positive results are often reported to the authorities before the persons themselves receive them.

2.2.7. Treatment and support for people living with HIV

According to the new WHO clinical guidelines (2013), ARVs should be administered to PLHIV with a CD4 count of 500 cells/mm or less. PLHIV with advanced clinical or laboratory HIV disease are prioritised for treatment.

As the Egyptian Ministry of Health's HIV/AIDS Situation, Response and Gap Analysis (2010) reports, the medical treatment of PLHIV is conducted by distributing ARVs free as well as following up and treating opportunistic infections and counselling. The NAP additionally runs 11 PLHIV support groups in different governorates whose leaders help

to nurture positive living with HIV. NAP and UNDP conduct a series of leadership training workshops for female PLHIV to equip them with the necessary technical and financial support to develop their own leadership and income-generation skills. UNAIDS and NAP have also launched home-based care to empower PLHIV's self-care and empower their caretakers to handle the common symptoms.

2.2.8. Encouraging knowledge and behavioural change

The PRB (2012) reports that in 2011, 20%, or around 16 million of Egypt's population fell in the 15-24 age group. Preparing the millions of Egyptians who will be adolescents within a few years for their safe transition to adulthood in a setting in which sexuality is an extraordinarily significant but deep-rooted taboo is seen as a great challenge. As young Egyptian people receive deficient information about sexuality they are left prone to coercion, abuse, unplanned pregnancy and BBV/STI infection. Traditional religious and family values, primarily designed to protect young people's welfare, are the very same factors blocking SRH education. UNESCO and leading NGOs developing SRH programmes for young people have published guidelines for SRH education. The initiative began at the International Conference on Population and Development in Cairo in 1994, where 179 countries agreed that appropriate SRH education should be provided to adolescents. Egyptian policymakers consented to these recommendations for policies and programmes within the framework of Islamic law, a stand frequently adopted by Muslim governments. However, subsequent Egyptian SRH programmes have fallen short of meeting the needs of young people, as only a few SRH topics are covered in public preparatory schools; there is anecdotal evidence that these SRH sections are often cancelled due to teachers and pupils being shy or unprepared.

Salama et al. (1998) conducted a study to assess KAP regarding HIV among alcohol and substance users and the effect of health education (HE) on their KAP. A total of 265 substance users were recruited from eight substance-user rehabilitation centres and given a baseline test preceding the HE course. Baseline data before the HE indicated that significantly more females than males got good scores for their knowledge about modes of transmission. About three quarters of substance users indicated negative attitudes towards PLHIV, though almost half felt sympathy; about a tenth of IVDUs shared needles, while more than a third of the females had some history of being FCSWs. Logistic analysis shows that a higher level of HE is the best predictive variable for good knowledge scores. Evaluation of the post-HE study reveals a highly significant increase

in knowledge scores among both males and females compared to the pre-test scores, and an increase in the number of male and female substance users with improved attitudes to PLHIV after HE. Health education is a successful tool for improving substance users' knowledge and attitudes towards HIV.

2.3. The Egyptian Freedom Drugs and HIV Programme

The research reported in this thesis has been carried out as part of the Freedom Drugs and HIV Programme, the biggest drugs and HIV prevention, rehabilitation and treatment programme in Egypt and the Arab world, which is sponsored by the Presbyterian Church in Egypt. It is based on the Minnesota Model Abstinence-Based Rehabilitation Programme, an abstinence-orientated and comprehensive approach to the treatment of substance use based on the globally-acknowledged 12-step approach of Alcoholics Anonymous (AA). In the form of Narcotics Anonymous it supports the meaning of 'drugs and dependency', promising recovery but 'not a cure', and advocates strong adherence to the programme. The residential period lasts about five or six months. The programme offers different types of group therapy, lectures and counselling, all based on the pattern that first evolved in Minnesota, US, in the late 1940s and '50s (Cook, 1988).

Since it was founded in 1989, the Egyptian Freedom Programme has attempted to serve the whole community, including both sexes and both Muslims and Christians. It was founded and is still led by Dr Ehab El Kharrat. The programme has 29 facilities across Egypt including, notably, an effective outreach sector for active substance users and other MARPs. The largest facility, the Rehabilitation Farm, lies in the Wadi El Natrun area of the Western Desert, 1.5 hours to the north-west of Cairo on the Cairo-Alexandria desert road. It spreads over 65 acres and comprises four distinct rehabilitation units, two detoxification centres, swimming pools, a football pitch and basketball and volleyball courts. Six thousand olive trees and two hundred palm trees plus ten acres of seasonal crops offer a place of tranquillity and meditation for clients.

The programme operates four anti-drug sub-programmes: a secular NA 12-step substance abuse recovery programme, a Christian NA 12-step substance abuse recovery programme and the subsidised *Forsa* (chance) and *Resala* (message) NA 12-step substance abuse recovery programmes. The Freedom Programme has an organogram of sector directors, centre managers and supervisors. The period of stay for a rehabilitating resident client ranges from five to six months according to progress made. The Freedom Programme has the highest success rate in the prevention and treatment of substance use in Egypt. Many

rehabilitation graduate substance users volunteer or take paid jobs as supervisors in the programme after their graduation and some go on to open private recovery or halfway houses themselves, often affiliated with the mother Freedom Programme.

The programme is proud of its pioneer peer-to-peer outreach and education programme launched in 2003. The rehabilitation graduates are trained technically by FHI 360-Egypt on drugs and HIV prevention, VCCT and harm reduction. This peer-to-peer outreach and education is very efficient. The rehabilitation graduates are well equipped to engage and talk to active substance users on the streets, who may not have been given any advice about quitting or protecting themselves from BBVs/STIs. The outreach sector is in Cairo.

The programme maintains a good relationship with influential policymakers, decision-makers and stakeholders concerned with drug use and HIV in Egypt, and with local and international faith-based and non-governmental organisations (NGOs). For instance, Caritas-Egypt mainly focuses on MSM; *Al-Shehab* works with FCSWs; *Wa'ey*, *Hayat* and Freedom Programme mainly work with IVDUs.

One of the most important milestones has been cooperation with the *da'eya* (Muslim preacher) Amr Khaled, who is well-known in the Islamic world for his charisma on a very popular TV programme that is watched by many young people and considered very influential in the Islamic world. Mr Khaled has presented a series of awareness sessions about alcohol and substance use, smoking and high-risk sexual behaviour. In view of this series Dr Khaled asked Dr El Kharrat if he would cooperate by sending some of his youth leaders for Freedom Programme training about BBV/STI prevention and dealing with addictive behaviours and different forms of substance use.

Soliman et al. (2010) indicate that HIV prevalence among IVDUs in Egypt is low; however, the existence of certain risk factors requires immediate preventative measures. The study shows that almost two thirds of IVDUs from the outreach sector of the Freedom Programme share injecting equipment. FHI 360 collaborates with the Freedom Programme by providing street-based outreach services to IVDUs with HIV preventative risk-reduction advice and referral to counselling services. The outreach and education are provided by rehabilitation graduates, many of whom are volunteers. The Freedom Programme has offered over 12,000 IVDUs, MSM and FCSWs counselling, peer education, primary medical care and nutritional support. It was the first street-based outreach programme for IVDUs in Egypt and the Arab world. At follow-up, needle-sharing was found to have had dropped from 24% to 14%; 14% of the IVDUs contacted via the outreach programme had changed from intravenous injection to non-injection

practices, and 9% had received counselling for HIV. The primary benefit of the outreach programme among IVDUs has been an increase in their knowledge about HIV, HIV-testing and the reduction of high-risk behaviours. The Outreach Centres also keep IVDUs off the street and provide them with the services of support groups. This is a massive leap in the attempt to ensure that Egypt maintains a low HIV rate.

3. Literature review

The aim of this study necessitated searching the primary and secondary literature on epidemiology, public health and social sciences with special attention to Egypt and the MENA region. To give the topic more depth I also included papers with a global background and from non-Arab Islamic countries such as Iran and Pakistan. In Africa, I included countries in Sub-Saharan Africa (SSA) such as Kenya, Uganda, Northern Nigeria and Mali, whose societies and cultures resemble those of Egypt in several ways. Given the scarcity of published research, I also included reports from the UN and other experts.

In section 3.1 I review the evidence concerning the epidemiology of the relevant BBV infections: HIV, HCV and HBV. I then discuss the literature on the epidemiology of STIs and identify the most important behavioural patterns associated with increased risk of infection with these viruses.

In section 3.2 I go into greater detail on the behavioural risk factors that lead to infection with BBVs and STIs, especially substance use and different types of sexual behaviour. I discuss the complexity of these themes, looking at variables such as gender, age and social class, all of which have an impact on behaviour.

In section 3.3 I review the literature on the cultural context of risk behaviour and sexuality. My major search terms were based on publications dealing with religion, gender, stigma and discrimination. I grouped the themes that emerged from this literature into different categories so that a theoretical framework could emerge. As with the epidemiological literature, I assumed that variables such as religion, gender and stigma do not influence a person's behaviour in isolation but that all of these factors together form a person's belief system and the cultural context in which risk behaviour is acted out.

My methodological literature is mainly covered in Chapter 4.

3.1. Epidemiology of blood-borne viruses and sexually-transmitted infections

3.1.1. The global picture

In the following paragraphs I look at the figures on HIV, HCV, HBV and STI infection.

UNAIDS' World AIDS Day Fact Sheet (2015) reports the following worldwide figures: at the end of 2014 the number of PLHIV was about 36.9 million; during 2014, around 2 million adults were newly infected with HIV, a drop from 3.1 million in 2000, plus 220,000 children, down from 520,000 in 2000; during 2014 there were approximately 1.2 million AIDS deaths, again a drop from 2 million in 2005; between 2000 and the end of 2014 roughly 38.1 million people became infected with HIV and 25.3 million people died of AIDS-related diseases; and by June 2015, 15.8 million PLHIV had access to ARVs, an increase from 13.6 million in June 2014. According to UNAIDS (2012b) HIV prevalence across the world ranges from less than 0.1% to 15–28%. In the MENA region it is still less than 0.1%. UNAIDS (ibid) reports that the number of newly-infected HIV cases is continually decreasing: the number of new cases dying from HIV-related causes in SSA declined by a third from 2005 to 2011. Eastern Europe, Central Asia and MENA have also experienced significant increases in mortality; in the latter the incidence has increased by more than 35% since 2001, from 27,000 to 37,000 cases. UNAIDS' Global Fact Sheet (2012) also reports for the MENA region about 240,000 PLHIV by the end of 2014; approximately 22,000 new cases of HIV infection per year, a rise of 26% since 2000; 12,000 AIDS-related deaths per year, triple the number in 2000; treatment by ARVs covering 14% of adult PLHIV and 15% of PLHIV children aged 0–14; and 2400 new cases of HIV infection among children per year. However, UNAIDS (2012b) records that reliable data on the epidemic in the Arab world and the MENA region is scarce, which makes it difficult to keep track of trends accurately. The epidemic is concentrated among IVDUs, MSM, and FCSWs and their clients.

Abu-Raddad et al. (2010) assert that there is no HIV/AIDS epidemic in the general MENA population except in Southern Sudan. In other MENA countries the emerging epidemic is high only among MARPs, due to the male circumcision practiced widely in MENA and the sexually-conservative social and cultural norms, both of which play an important role in slowing the progression of HIV.

Looking at HCV infection, WHO (2015d) reports that hepatitis C is ubiquitous. The regions with the highest incidence and prevalence are Africa and Central and East Asia. HCV concentration in certain subgroups, for instance IVDUs and MSM, and/or the general population differ by country. There are several genotypes and strains of HCV whose distribution varies geographically. There are 130–150 million people worldwide with chronic HCV infection, according to WHO (2015e).

Hanafiah et al.'s (2013) literature review reports that global HCV prevalence is 2.3–2.8% and that the number of people with hepatitis C antibodies (HCV-Abs) increased from more than 122 to 185 million from 1990 to 2005. Central and East Asia and MENA have the highest prevalence (more than 3.5%); South and Southeast Asia, SSA, Andean, Central and Southern Latin America, the Caribbean, Oceania, Australasia and Central, Eastern and Western Europe have a moderate prevalence of 1.5–3.5% and Asia Pacific, Tropical Latin America and North America have a low prevalence of less than 1.5%.

Hatzakis et al. (2013) record chronic viral hepatitis as a global threat. In many Mediterranean countries the disease burden remains underestimated because of the lack of proper epidemiological data. The incidence of HCV and HBV is increasing in several Mediterranean countries due to unvaccinated populations growing older, migration, and increasing intravenous (IV) substance use. The high transmission rate of HCV and HBV in healthcare settings, especially via blood and blood products in North Africa, highlights the necessity for the application and monitoring of universal precautions concerning the use of paid repeat blood donors. Similarly, HCV-Abs exist in patients with the hepatitis B surface antigen (HBs-Ag) seropositive chronic liver disease. The highest rates of co-infection occur in the Mediterranean region and other individual areas globally (Mansell & Locarnini, 1995).

With regard to HBV infection, the world is divided into three areas according to prevalence in the general population: high (more than 8%); intermediate (2-8%), into which the MENA region falls; and low (less than 2%) (Hou et al., 2005). Daw et al. (2014) conducted a longitudinal study in Libya on a sample of 9170 individuals from the general population. They found HBs-Ag prevalence to be 3.7%, HCV-Abs 0.9% and HIV-antibodies (HIV-Abs) 0.15%, with a co-infection rate of 0.02%. HBV is more prevalent in the population in those over 50 years old and is associated with a positive family history, while HCV-Abs and HIV-Abs are commoner among those aged 20-40. Risk behaviour, for instance IVDU and blood transfusion, are incriminated. The authors conclude that HBV, HCV and HIV and a high prevalence of co-infection are associated with geographic and with ethnic and socioeconomic considerations in society. There is little data on HBV in Arab countries. Chronic HBV prevalence is decreasing in some Arab countries in the Gulf region, Lebanon and Libya, although it is still high in Egypt (Gasim, 2013). The differences in prevalence between Arab countries can be related to discrepancies in risk behaviour and other risk factors.

Ott et al. (2012) conducted a systematic literature review on global HBV infection and HBs-Ag prevalence over a 27-year period (1980-2007) during which the prevalence of chronic HBV infection decreased all over the world. Despite this decrease, the total number of HBs-Ag positive individuals increased from 223 million in 1990 to 240 million in 2005.

WHO (2015a) reports that globally there are more than a million new cases of STI infection a day. There are more than 357 million new infections with one of four STIs: chlamydia (131 million), gonorrhoea (78 million), syphilis (5.6 million) and trichomoniasis (143 million) annually. It is estimated that there are more than 500 million people with Herpes simplex virus (HSV) genital infection and more than 290 million women with Human papilloma virus (HPV) worldwide. WHO (2015b) records that more than 5% of FCSWs in 34 countries, more than 10% in 21 countries and over 20% in 7 countries, and more than 5% of MSM in 42 countries, more than 10% in 20 countries and over 20% in 8 countries have an active syphilis infection.

Gewirtzman et al. (2011) finds the highest prevalence of STIs worldwide in the developing countries, while most developed countries have low or decreasing incidence rates. Many STIs are hard to diagnose, hence global incidence might be even higher due to limited screening and underreporting, Da Ros and Schmitt (2008) suggest. The WHO's East Mediterranean Regional Office (EMRO) suggested in 2006 that the STI epidemic, including HIV/AIDS, in the Eastern Mediterranean region (EMR) is still in its early stages. Although the HIV/AIDS epidemic in the EMR is generally of low prevalence, its rate of increase is the second highest in the world.

Antimicrobial resistance for STIs, especially gonorrhoea, renders prevention efforts and efficient treatment difficult and adds to the extensive spread of STIs. WHO (2001) concurs that the transmission routes for both STIs and HIV are sexual activity, transfused blood and blood products. Many of the prevention methods for STIs and HIV are also the same. The association between STIs and HIV became more obvious in the 1990s (UNAIDS, 2000).

3.1.2. Egypt

In this paragraph I look at the secondary literature on the prevalence of HIV infection in Egypt. The Global AIDS Response Progress Reporting 2015 (UNAIDS, 2015) estimates Egyptian HIV and AIDS figures at the end of 2014 as follows: 8,800 PLHIV; a prevalence rate for adults aged 15–49 of less than 0.1%; 8,600 adults aged 15 and over living with

HIV; 2,400 women aged 15 and over living with HIV; fewer than 500 children aged 0–14 living with HIV; and fewer than 500 deaths due to AIDS.

UNAIDS (2012a) reports that the first AIDS case in Egypt was discovered in 1986. Although the prevalence since then has remained low at 0.1%, the rapidly-growing youth population and the changing sexual trends among them, including an increase in BBVs/STIs, has raised the potential for contracting HIV. Unsafe sex and unsafe injection among MARPs and limited condom use among the general population in Egypt risk a broader epidemic. The primary mode of transmission is heterosexual sex followed by gay sex, renal dialysis and blood transfusion in that order.

Looking again at the high prevalence of HIV among MARPs, according to the 2010 USAID-funded Biological and Behavioural Surveillance Survey (BBSS) conducted by the MOH, Egypt has low HIV prevalence of less than 0.2% (Egypt-NAP, 2011), with a concentrated epidemic among MSM (5.4% in Cairo and 6.9% in Alexandria) and IVDUs (Cairo 7.7%, Alexandria 6.7%). This is the second round of the BBSS, following the first in 2006. Intravenous drug use was the cause of 2.9% of HIV infections in Egypt, with four times more males infected than females. Men are more frequently tested for HIV than women. The 2006 BBSS, which specifically targeted MSM, IVDUs, FCSWs and street children, identified a concentrated epidemic of 5.9% among MSM in Alexandria with a seroprevalence of 0.8% among IVDUs and of 0.6% among FCSWs. There is a general reluctance to discuss issues related to MARPs on the part of the government and CSOs (Egypt-NAP, 2011).

However, the National AIDS Programme in Egypt (2011) contradicts the UN reports, finding only 3,746 Egyptian PLHIV by the end of 2011, of whom 15.7% had progressed to AIDS. From 1990 to 2011 there has been a regular escalation in the detection of HIV cases, from 1,040 cases in 2001–2005 to 1,663 in 2006–2009. At the end of 2010 the number of HIV cases reported was 4,313. HIV prevalence remained at less than 0.02%, although a population-wide survey has never been conducted. Previous UN reports, for instance that of the Global AIDS Response Progress Reporting (Arab Republic of Egypt, 2012), estimate the number of PLHIV in Egypt to be 11,000 up to the end of 2010, the majority being adults aged 25–40 and with a male-female ratio of 4:1.

WHO (2014) records that HCV is considered a national burden as it is highly infectious. At least a tenth of individuals aged 15–59 are HCV-seropositive. HCV may include symptoms or signs of liver cirrhosis, liver failure and/or cancer after a long period of time, increasing the burden of HCV in Egypt. In spite of the increasing number of specialised

centres managing HCV, HCV is still spreading with about 165,000 new infections a year. Egypt's weak health system exacerbates the problem. The government is promoting several prevention efforts, especially in healthcare facilities, where eight in ten new HCV seropositive cases occur. Increasing public awareness is crucial, and the MOH is working with UN agencies such as WHO and UNICEF to increase awareness.

Hatzakis et al. (2013) assert that Egypt has the highest prevalence of HCV globally and provides free and subsidised treatment through its National Control Strategy. According to Mohamed et al. (2013), Egyptian prisons do not screen inmates for BBVs so there are no statistical data on HCV or other BBVs such as HBV or HIV among prisoners. Research on the prevalence of BBV antibodies was conducted on a sample of prisoners selected from 500 inmates of a specific prison who voluntarily completed a risk-factor questionnaire and provided blood samples. The results found 15.8% HCV antibody prevalence, 9.8% HBV core antibody (HBc-abs) prevalence, a 1.2% rate of co-infection with HBV and HCV, and zero HIV antibody prevalence. The best predictor for HCV and HBV infection is a history of IVDU, more than ten years in prison, and sharing toiletries. Guerra et al. (2012) agree with the above and record Egypt as the country with the highest HCV epidemic in the world.

In 2008 a nationwide demographic and health survey (DHS) (El-Zanaty & Way, 2009) to test for HCV-Abs confirmed its very high prevalence in Egypt: 11,126 individuals aged 15–59 answered a questionnaire on socio-demographic characteristics and iatrogenic exposure before giving a blood sample. The survey found HCV antibody prevalence to be 14.7% nationwide, significantly higher in males than in females, with a prevalence of 18.3% in rural areas and 10.3% in urban areas, and with females associated with an increased risk of HCV infection in urban areas. Age, male gender, poverty, past history of IVDU, anti-schistosomiasis treatment, blood transfusion and living outside the frontier governorates are all significantly associated with an increased risk of HCV infection. Additionally, prevalence gradually increased with age, reaching 46.3% of men and 30.8% of women in the 50–59 age group.

A study conducted in Egypt by Magder et al. (2005) to estimate the risk of HCV infection between spouses found that 6% of spouses contract HCV from their infected partner, with infected men ten times more likely to infect their female partners than vice versa. In the same year a survey of acute HCV among 315 patients in two Cairo fever hospitals found that 28.3% had acute HBV and 35.2% had acute HCV. In the latter, dental treatment and

IVDU in the six months prior to diagnosis were found to be high-risk procedures (El Gaafary et al., 2005).

Egypt is among the countries with an intermediate endemicity of HBV (Abu El-Makarem et al., 2012). Wasfi and Sadek (2011) tested 3240 blood donors in Alexandria for HBs-Ag and HCV-Abs and found the prevalence of both highest among urban males, and especially manual labourers. These rates are lower than those found by previous studies, perhaps owing to screening for BBVs prior to blood donation.

Gaffar et al. (1994) conducted a survey of 3186 individuals from four Egyptian governorates who represented both sexes, urban and rural populations and all age groups. Serum was tested for HBs-Ag, hepatitis B surface antibodies (HBs-Abs) and hepatitis B core antibodies. The prevalence of HBs-Ag was found to be 6.35% and of HBc-Abs, 38.68%. A high prevalence among both Egyptian and Nubian populations, especially in Aswan, the southern part of Egypt, was also found.

Amin (2014) reports that in 2008 the WHO estimated that about 10 million new HIV cases occur in the MENA region per annum. The real burden of STIs in several developing countries, including MENA, is overlooked due to the lack of real STI data, their high incidence and prevalence among MARPs and other high-risk populations, the many complications, and antibiotic resistance, all augmented by the drastic increase in HIV infection, the deterioration of the economy and inadequate STI prevention and management programmes (Mayaud & Mabey, 2004).

In Egypt the incidence of STIs is generally unknown apart from the WHO's estimated figures, and its real burden on the state is unquantified. Some of the reasons for this are the widespread growth and increased awareness of MARPs such as MSM, FCSWS and IVDUs, which will be magnified by the revolutionary sexual behaviour of the population in light of the recent social changes, the increasing ease of travel for Egyptians who are thus mingling more with other populations, and the growing number of HIV-seropositive cases in the country (Kelley & Eberstadt, 2005; Abu-Raddad et al., 2013). Amin (2014) argues that at the same time, due to the conservative religious Egyptian Middle Eastern environment the MOH's report of low incidence and prevalence in comparison to the UN's figures is coupled with a general reluctance to engage in prevention and management, in spite of several scholars having pointed to the sociosexual changes in Egypt that are leading to an increase in STIs in the country. Although a national strategic plan to control STIs has been declared, there is no sign of its imminent implementation (WHO, 2011b). The WHO (2004) stresses that any effort to control the spread of STIs in

Egypt cannot be successful unless it involves MARPs. For instance, the Egyptian MOH's studies of MARPs found higher rates of STI infection than before, with syphilis seroprevalence 7.5% among MSM (El-Sayyed, Kabbash & El-Gueniedy, 2008b). However, generally speaking in Egypt there is very little available information on STI epidemiology, and what there is inadequate to correctly identify the burden of STIs, inform planning programmes or evaluate the effectiveness of interventions. Epidemiological data on STIs are generally taken from sporadic research with an emphasis on HIV/AIDS, thus neglecting other such infections. Accordingly patients with STIs are not receiving the appropriate care at a time when Egypt is facing many challenges to keeping HIV and STI prevalence low, such as poor surveillance programmes, health inequity leading to women's insufficient access to sexual and reproductive health services, HIV-related S&D, the criminalisation of HIV, the low status of women and a high influx of refugees from certain surrounding countries (Amin, 2014). MOH Egypt (2006b) reports that patients in Egypt do not openly seek medical care for STIs, resulting in self-medication and the use of traditional healers due to their greater accessibility and convenience, confidentiality and less stigmatising attitude. However, many patients obtain incorrect drug prescriptions or are given improper doses which increase the antimicrobial resistance of their STI organisms. Many diagnostic facilities offer limited or no counselling and treatment services.

3.2. Behavioural risk factors for infection by blood-borne viruses and sexually-transmitted infections

This section looks at behavioural aspects of infection and transmission. The risk of infection, modes of transmission, coinciding diagnosis and prevention and treatment measures for the three blood-borne viruses studied here, HIV, HBV and HCV, and STIs overlap. The main modes of transmission are unsafe sexual practices and unsafe drug injection. The research publications discussed below report a strong association between these risk behaviours and infection by the three mentioned BBVs and STIs.

According to the CIA World Factbook (2008, 2014), Egypt is a transit point for cannabis, heroin and opium traders travelling to North Africa, Europe and Israel, and for Nigerian drug dealers' money-laundering, probably due to its weak and lenient rules and regulations.

The risk of infection with HIV for an individual in Egypt depends on his or her knowledge, attitude and behaviour, and society as a whole is affected by social, cultural and political factors and judiciary laws (Shawky et al., 2009).

3.2.1. Intravenous drug use

In this section I discuss first the literature on the relationship between substance use, especially IVDU behaviour, and HIV infection, and then the literature pertinent to substance use and HCV, HBV and STIs.

WHO (2016) reports that there are approximately 16 million IVDUs worldwide, of whom 3 million are PLHIV. Intravenous drug use is the cause of a tenth of all new HIV infections, and in certain parts of Eastern Europe and Central Asia substance use causes more than 80% all HIV infections. This is why WHO stresses HIV harm reduction strategies for IVDUs and has created a comprehensive package comprising needle and syringe exchange programmes; opioid substitution therapy for substance-user rehabilitation and recovery; VCCT for HIV; HIV treatment and care; information and education; condom distribution and use; STI management; and the management of TB and viral hepatitis. WHO works extensively with UN agencies such as UNODC and UNAIDS and with other stakeholders including NGOs to advocate for the implementation of these harm-reduction interventions.

The UN General Assembly Special Session on Drugs (UNGASS) (2016) records that substance users are at high risk of drug overdose, injury and various infections, especially BBVs such as HIV, HCV and HBV. Sharing equipment is particularly dangerous, as it increases the chance of spreading HIV among IVDUs. UNGASS explains the term ‘harm reduction’ as a group of policies and programmes aiming to reduce the brunt of health and socioeconomic hazards linked with substance use; a mixed community-health and human-rights approach which is realistic and non-judgmental regarding the various substance-use problems. Harm-reduction interventions do not try to reduce drug use as much as raise community awareness of the health hazards and provide the tools needed to reduce harm. UNGASS cites the International HIV/AIDS Alliance’s recommendation of a harm-reduction package which includes SRH services including PMTCT; communication about behavioural change; basic health services including overdose prevention and management, such as the distribution of naloxone; services for substance users, especially those in prisons; advocacy; psychosocial aid; access to legal services; children’s and youth programmes; improvement in the standard of living, and economic

development. UNGASS also mentions the IDPC Drug Policy Guide (2012), which adds a final harm-reduction intervention – drug consumption rooms or safe injecting facilities – to the complete list compiled by UN agencies for a harm reduction guide called the ‘WHO, UNODC, UNAIDS technical guide for countries to set targets for universal access to HIV prevention, treatment and care for injecting drug users: 2012 revision’.

UNODC’s (2015) World Drug Report records opiates as by far the most common drugs used worldwide. They are associated with IVDU, HIV infection, deaths due to overdose and most admissions for detoxification and rehabilitation in Europe and Asia. IVDUs are more vulnerable to infection with BBVs than the normal population, especially in prison cells, which present a high-risk medium for the transmission of organisms such as HIV and HCV. The UNODC/WHO/UNAIDS/World Bank joint estimate is that outside SSA about a third of new HIV infections are among IVDUs and about 1.65 million IVDUs were PLHIV in 2013. This is 13.5% of the total number of IVDUs in 114 countries. IVDUs are more vulnerable to dying prematurely than the rest of the population due to getting infected by certain organisms such as HIV, and lethal accidents such as overdosing. UNODC’s (2014) World Drug Report states that there are approximately 12.7 million IVDUs worldwide, of whom 13% are PLHIV and half are infected with an HCV. Countries that use harm-reduction techniques with IVDUs have been successful in avoiding widespread HIV, while in countries that do not, such as East Europe and Asia, a third of IVDUs have an HIV infection. There is also an association between non-intravenous drug use practices such as smoking cocaine, and BBV/STI infection, especially through sexual practices.

Egypt’s NAP-BBSS (2010), investigating the prevalence of HIV in MARPs, i.e. MSM, FCSWs and IVDUs, reports several high-risk practices on the part of the 275 Cairo and 285 Alexandria IVDUs sampled, with 22.9% and 40.5% respectively having shared needles in the month before the survey. Only 24.6% of IVDUs reported using condoms at their last commercial sex encounter, 4.8% reported using condoms at their last sexual encounter with a regular sex partner and 14.3% used condoms at their last sexual encounter with an occasional partner. Additionally, 13.1% of the sampled IVDUs in Cairo and 10.8% in Alexandria sold sex, while 14.3% and 7.7% respectively reported engaging in gay sex. The spouses of IVDUs were also at risk, as 48.7% and 29.3% of the IVDUs in Cairo and Alexandria respectively reported being married at the time of the survey. About 80% of IVDUs in both groups had heard of STIs and almost all had heard of HIV. However, only 9.5% had been tested for HIV.

HIV can be transmitted by sharing drug injection equipment such as needles, syringes, water for mixing drugs and cotton for filtering them (Anthony et al., 2005). UNAIDS/99-1E (1999) reports a direct relationship between substance use and HIV transmission. IV drug/substance use is directly responsible for 5% of HIV infection worldwide. Male IVDUs have a greater risk of HIV infection than female IVDUs, and of transmitting it to others. Male IVDUs generally have non-IVDU partners who can contract the infection from them. Males are more likely to share their injection kit than women, increasing the risk of transmission to other IVDUs.

UNODC (2004) reports that 99% of IVDUs in Egypt have never been tested for HIV. Hasan, Farag and Elkerdawi (1994) cite the Arab International Centre for Fighting against AIDS study on the problem of IVDUs and their sexual activities in Egypt, including an evaluation of HIV prevalence. The sample included 258 IVDUs who were interviewed about their sexual practices and condom use. Blood samples from 79 respondents were tested for HIV antibodies. The results for the 2.3% sexually-active individuals revealed that despite the few HIV-seropositive cases, only 11% used condoms for casual sex and only 5% with regular and casual sex partners, revealing a high risk of HIV among IVDUs and their sex partners. HIV, HCV and HBV infections potentiate one another and are related to sharing needles during substance use injection (Baozhang et al., 1997).

Nada and El Daw (2010) measured the prevalence of HIV-risk behaviours among street children in Egypt such as violence from other street children or the police, forced sexual abuse, taking drugs and its relationship to sex, and knowledge about HIV/AIDS via a cross-sectional qualitative study and observation of a large random sample of 857 street boys and girls aged 12–17 in Greater Cairo area and Alexandria. The majority of these children reported that they had experienced harassment or abuse from police and other street children; two thirds had used drugs; and two thirds of the older adolescents were sexually active, half of these reporting having multiple sex partners and never using condoms. Half of the female street children in the Greater Cairo area and almost all of them in Alexandria reported having experienced sexual abuse. The majority of the children reported having been exposed to multiple recurrent high-risk behaviours in their dealings with overlapping subcategories of MARPs such as MSM, IVDUs and FCSWs, thus risking contracting HIV.

Salama et al. (1998) conducted a study to assess alcohol and drug users' KAP regarding HIV/AIDS and the effect of health education (HE) on this, using pre- and post-testing. A total of 265 substance users were recruited from eight drug rehabilitation centres. Results

indicated that good knowledge scores regarding modes of transmission were significantly higher among males than females. About three quarters of substance users had negative attitudes towards PLHIV; half had sympathy for them, and one tenth shared needles. Logistic analysis found that a high level of HE was the best predictive indicator for good knowledge, as shown by a highly significant increase in knowledge scores and improved attitudes towards PLHIV among both males and females in the post-HE test. HE was found to be a successful tool for improving the knowledge and attitudes of substance users regarding HIV risk practices and PLHIV.

WHO (2015d) states that HCV's most common modes of transmission include: in IVDUs, sharing injection paraphernalia, and in healthcare facilities, through the reuse of infected instruments or their inadequate sterilization and the transfusion of infected blood or blood products. WHO (2000) reports that IVDU and unprotected sex are the most important methods of transmission of HCV in both developed and developing countries.

Centers for Disease Control and Prevention (CDC) (2015) reports that the main modes of HCV transmission are large surface area or repeated exposure of the skin to nonsterile infected blood, such as occurs in IVDU; infected blood and blood products; infected organ transplants; infected needle stick injury; and birth to an HCV-seropositive mother. Less common routes include sharing personal items that are contaminated with HCV-infected blood such as razors and toothbrushes. Older and former IVDUs generally have an HCV prevalence of approximately 70%–90%, reflecting the high risk of contracting HCV due to prolonged IVDU. This high prevalence rate is largely due to sharing syringes and needles during the 1970s and 1980s, before the risks of BBVs were widely known and awareness-raising efforts were made. CDC (1998) reports that HCV is four times more likely to be transmitted through substance injection than HIV. Many studies in the West show an extraordinary HCV prevalence of 66–83% among IVDUs. Francisci et al. (1995) found that among substance-user PLHIV the prevalence of HCV-Abs was 72%, while among MSM it was only 7%.

The UNODC (2015) World Drug Report reports that while it is estimated that about 2.2% of the general population is infected with HCV globally, this prevalence is 25 times higher among IVDUs, approximately 52% or 6.3 million of whom are infected globally. A large number of IVDUs are not made aware of their HCV infection, and even if they know, their healthcare-seeking behaviour is poor in that they do not adhere to the antiviral treatment protocols. The authors of the report anticipate that HCV morbidity and mortality will increase further in the ten years from 2014.

According to Dewing et al. (2006), worldwide intravenous drug use is becoming a major mode of HIV transmission, as witnessed in several African countries such as Egypt, Kenya, Tanzania, Mauritius, Nigeria and South Africa. The authors emphasise the importance of educating school pupils about the relation between substance use, most importantly intravenous drug use, and BBV/STI infection.

Jimenez et al. (2009 a,b) report on a case control study conducted in two fever hospitals in Greater Cairo area with 233 acute HBV and 94 acute HCV seropositive cases to identify the risk factors for HBV and HCV transmission. The study found that transmission modes for both viruses included intravenous substance use, recent marriage (recent sexual activity), surgical stitches and being shaved at barber shops, being more prevalent among illiterates.

Badr et al. (1998) conducted a controlled study among substance users in Alexandria to determine the correlation between substance use and health problems, recruiting 100 substance users and 80 controls. HBV exposure and HBs-Ag seropositivity were 48% and 21% respectively among substance users, compared to 26.3% and 5% among the controls. IVDU and tattooing carry the highest risk of transmission between substance users; a positive correlation between HBV exposure and both the duration and the number of IV injections/day has been shown. Attia (1998) suggests that HCV and HBV are major health problems in Egypt and all of Africa. The prognosis for both viruses is worse in conjunction with HIV.

3.2.2. Sexual behaviour

In this section I discuss the literature on the relationship between sexual behaviour and HIV infection, followed by the literature pertinent to HCV, HBV and STIs.

According to Global AIDS Response Progress Reporting 2016 (2016), delaying the onset of young people's sexual debut is a crucial aim in several countries for countering HIV infection. It has been shown that delaying the first sexual encounter until later in life minimizes the risk of contracting HIV per each sexual act, mainly for women, as HIV transmission is highly determined by unsafe sex and multiple sexual partners. Condom use is crucial in reducing HIV infection rates. HIV prevalence figures for FCSWs are usually higher than in the general population and many times is more than double that in the general population. HIV transmission among FCSWs depends on multiple factors such as frequent sexual intercourse and multiple, non-regular sex partners; however, if condoms are used correctly and consistently the risk of HIV transmission falls

significantly. As part of their responsibility to protect themselves and their clients FCSWs should undergo HIV testing to learn their individual seropositivity. Knowing one's true seropositivity status is necessary for proper health-seeking behaviour. There are also twice as many HIV-infected individuals among MSM than in the general population. To reduce the risk of HIV infection significantly, condoms should be used correctly and all the time during sex, whether with a male or a female sex partner.

WHO (2015f) reports that MARPs such as MSM, transgender individuals and IVDUs are highly vulnerable to infection by HIV. Youths are more prone, as they largely practice unprotected sex and unsafe injection. This higher vulnerability is mostly because of violence, withdrawing from family and friends at times, unbalanced power relationships, stigmatisation and discrimination, and the criminalisation of HIV.

UNAIDS (2014a) shows that the prevalence of HIV among sex workers is twelve times that in the general population, even in countries with high HIV prevalence. In 2012 an analysis of 16 countries in SSA showed an HIV prevalence of more than 37% among sex workers. Stigmatising and discriminatory violently-punishing legal and social environments are significant indicators of this high vulnerability to HIV infection (as they scare sex workers away from seeking the necessary help they desperately need). Hostile stigmatising environments sanction the availability, access and use of HIV care and support for FCSWs and their male clients.

Worldwide, the prevalence of HIV among MSM is 19 times higher than in the general population, and the number of new cases is rising faster among MSM. Several key factors limit the availability of, access to and use of HIV prevention, testing and treatment services among MSM, including stigmatisation, discrimination, gender-based violence, sexual-orientation, gender-identity-based violence and the criminalisation of gay sexual behaviours, according to UNAIDS (2014b). Some studies show that MSM worldwide are in ongoing jeopardy of HIV infection. A study by the World AIDS Campaign (2000) involving a group of unmarried manual labourers and jobless gay men aged 15–25 with little education or literacy shows that age is one of the most important factors because it relates to several other factors: many younger MSM have a low income, and many use alcohol and drugs while having sex. Young people take greater risks, further magnifying the chance of HIV infection. Gay sex often involves anal intercourse, which presents a high risk of HIV transmission for the receptive partner, less for the penetrating partner. At least 5–10% of HIV cases worldwide are due to gay sex (UNAIDS/99-1E).

In Nigeria, Ezomoh (2012) ran a questionnaire survey on 1600 MSM whose ages ranged from 18 to over 40, which found that although almost all were well-informed about condom use, two thirds did not use them regularly and three quarters practiced unsafe sex in the last three months before the survey, while half smoked and used alcohol. The authors recommend the initiation of certain HIV VCCT services for gay men to reduce their risk of infection by BBVs/STIs and offer them the necessary care.

UNAIDS (2012a) reports that risk behaviours predict an emerging epidemic among MARPs. The behavioural data in Egypt reveal that only 17.39% of MSM in three governorates – 260 in Cairo, 262 in Alexandria and 269 in Luxor – used condoms during their last commercial sex transaction, and 20.29% used condoms with their last non-commercial regular or irregular sex partner. Earlier studies show that a quarter of MSM report having had one or more STIs in the three months before the survey. MARPs' high vulnerability is manifest in their low condom use and high rate of STI infection.

According to NAP Egypt (2011), two thirds of HIV transmission in Egypt occurs sexually, almost half between heterosexuals and a fifth through same-sex sexual acts. Transmission via IVDU comprises almost a third of cases. Only 18.2% of the total number of people using VCCT services in 2010 were female, and 39.8%, 59.2% and 86.5% of MSM in Cairo, Alexandria and Luxor respectively reported having sex with female partners. This sheds light on the high vulnerability of MSM's female sex partners (NAP-BBSS, 2010). The BBSS shows that despite lower HIV prevalence among FCSWs, risk behaviours result in new infections. According to the 200 Cairo FCSWs surveyed, only a quarter used condoms at their last commercial sex encounter, and 41% of FCSWs reported using condoms at least once during a transaction with a client in the month before the survey. Only 11% of FCSWs reported using condoms on the last occasion they had sex with an intimate partner, and 27.4% reported using condoms at least once in the previous month with an intimate partner. Of this sample of FCSWs, 45.5% were married, only 3.4% had ever been tested and 30.6% reported suffering from a genital ulcer or sore and 20.4% from a genital discharge. There are alarming indexes on risk behaviours in Egypt overall; e.g. the rate of condom use is low among both the general population and MARPs (Kabbash & Shokr, 2005).

Cohen (1994) suggest that approaches to the prevention of the sexual transmission of HIV need to focus on four main areas: sexual abstinence, minimising the number of sex partners, encouraging condom use and treating STIs.

WHO (2015d) reports that among the less common HCV transmission routes are unprotected sex and from mother to baby (during delivery, but not during pregnancy or lactation). Among the list of primary prevention interventions recommended by WHO is proper and regular condom use.

Kelly and Skidmore (2002) point out that sexual transmission occurs in only 5% of the partners of HCV-infected patients. This infectivity is lower than that of HIV and HBV. HCV is transmitted sexually from males to females more than from females to males. Several behaviours increase the risk of contracting HCV sexually, such as engaging in commercial sex, other STI infections and multiple sexual relationships (CDC, 1998). CDC (2015) reports that of the uncommon but existing routes of HCV transmission, is the sexual route. Semen in particular is incriminated in transmitting HCV to sexual partners.

Hou, Liu and Gu (2005) explain that duration of IVDU has a considerable influence on the risk of contracting HBV. Unsafe sexual behaviour increases the risk by up to less than 5%. In countries with low endemicity sex is a major transmission route for the virus. The risk of infection is higher with certain practices and among certain subgroups such as MSM, IVDUs and heterosexuals with multiple sexual partners (Marsano, 2003).

Wright et al. (1996) suggest that for heterosexuals, the factors associated with a high risk of HBV infection include the duration of sexual contact, number of sexual partners, history of STIs, intravenous drug use, IVDUs' sexual partners, commercial sex and FCSWs and their clients. The risk of heterosexual transmission is greater for females. The reuse of contaminated sharp instruments is also indicated as a mode of HBV transmission, particularly in areas of intermediate prevalence such as Egypt. Parenteral transmission via the body rather than the mouth and the digestive system is the riskiest mode of infection in developing countries (Dienstag & Isselbacher, 1994).

WHO (2015b) reports that female, male and transgender adults and young people who trade sex for money or goods on a regular or irregular basis are at higher risk of contracting HIV and other STIs, particularly syphilis, than the normal population for several reasons: their multiple sex partners, unsafe work environment and inability to negotiate regular condom use with clients.

STIs are transmitted mainly through sexual contact: genitals-to-genitals, anus-to-genitals or mouth-to-genitals (De Schryver & Meheus, 1990; Hatcher et al., 1997). According to El-Kak (2013), 7% of the general population in the extended MENA (EMENA) region

have curable STIs. El Kak reports that STI prevalence in this population of EMENA rose from 10 million cases in 1999 to 22.5 million in 2005. These figures apply across age groups and gender and social categories living in the same conservative and stable societies. El-Kak identifies many factors that influence the patterns of sexuality and sexual behaviour in EMENA. Risk factors responsible for the rising STI infection figures include new forms of marriage such as temporary marriage, premarital sex whether penetrative or not, extramarital sex, commercial sex, the lack of good-quality services and educational resources for sexual and reproductive health education, and under-reporting/poor notification of STI infection. STIs which can be cured include *Nisseria gonorrhoeae* and *Chlamydia trachomatis*, while those that cannot be cured include the HPV and Herpes simplex virus Type-2 (HSV-2). El Kak found *trichomonus vaginalis* more prevalent in females and *Chlamydia trachomatis* more widespread in males, perhaps owing to extramarital and loose undisciplined sexual behaviour. The rise in the prevalence of STIs that cannot be cured, i.e. HSV-2 and HPV, may be related to the worldwide rise of oral and anal sexual practices. In EMENA, where virginity is still highly respected, appreciated and protected, oral and anal sex and outercourse are often resorted to. STI prevalence, though low, appears to be increasing, following the trend worldwide that denotes the similar sexual practices of youth all over the world: unprotected sex, premarital sex and multiple sex partners.

WHO (2006) reports that young people, who represent only a quarter of sexually-active individuals in a population, account for half of new STI cases. Their high-risk practices threaten their health by increasing their vulnerability to new infection. Examples of such high-risk behaviour include multiple sexual relationships and unprotected sex with MARPs such as FCSWs, IVDUs and prison inmates, and the generally low economic status of young people may lead them to become commercial sex workers. WHO claims that every day 7000 young people across the world are infected by STIs, hence they are major players in the global STI crisis. With regard to the association between STIs and HIV, WHO (2015a) states that HSV-2 and syphilis can increase the risk of contracting HIV threefold. In low and middle-income countries diagnostic tests are usually unavailable, and if available they are generally expensive and geographically hard to access. Other obstacles to STI screening and treatment efforts include poor-quality healthcare equipment, untrained healthcare workers, little or no follow-up of sexual partners and insufficient proper medication. Stigmatisation is another major problem that leads to the increased incidence and prevalence of STIs; in several countries STI services

are offered separately and are often unavailable from primary healthcare units and family-planning and routine services. As a result the majority of the under-served subcategories of MARPs have no safe access to proper healthcare services.

Although there is a world trend towards marriage at a higher age, in parallel there is also an increase in adolescent premarital sex, which is practiced in developing countries without precautions against STIs (Senayake, 1998).

3.2.3 Women and young people's vulnerability to BBVs/STIs

Women and young people appear to be especially prone to BBV/STI infection in several ways. In this section I discuss this globally, in MENA region and then in Egypt.

3.2.3.1 Globally

UNODC's (2015) World Drug Report states that only a sixth of substance users have access to treatment globally. Women especially face obstacles to accessing treatment: while a third of substance users worldwide are women they make up only a fifth of substance users in treatment. The report cites UNAIDS (2015) which records that although this varies between regions and countries, female IVDUs are generally more at risk of contracting HIV than male IVDUs, and HIV is more prevalent among female than male IVDUs, especially in prisons. Sexual transmission is the leading cause. Other causative factors are the higher S&D that female IVDUs are subjected to more than males, compels them to conceal their substance use problem and so refrain from seeking healthcare, especially with the shortage of gender-specific or gender-friendly healthcare services; female IVDUs' problems with meeting safe injection requirements, e.g. access to harm reduction initiatives such as needle and syringe exchange programmes; female IVDUs' use of commercial sex, which is often unsafe, to provide drugs for themselves and sometimes for their sexual partners; and the association between women engaging in commercial sex and sharing injecting equipment.

WHO (2015c) reports that globally many new STI infections occur among adolescents and young adults who may not be aware that they are seropositive. This harms their future physical health and psychological and social well-being. Most importantly regarding sexual and reproductive health, undiagnosed and untreated STIs can damage the female reproductive organs, leading to false pregnancy results and/or infertility. HPV infection causes over half a million cases of cervical cancer and over quarter of a million cervical cancer deaths annually. Advocating safer sexual practices and sex education for adolescents and ensuring syphilis testing and treatment for all pregnant women is

necessary for BBV/STI prevention. WHO (1993) found that about half of PLHIV globally were less than 25 years old and that in the developing countries up to 60% of all new infections are among 15–24-year-olds. Twice as many young women are infected as young men. Young adults face obstacles to managing BBVs/STIs, as most lack access to healthcare facilities and are reluctant to seek medical advice, believing that BBVs/STIs simply vanish if left untreated, or do not recur once treated. Lack of proper sex education, the inability to negotiate safe sex and lack of access to contraceptive and reproductive health services all count as risk factors for HIV infection (Klein, McNulty & Claudia, 1998). Wasserheit et al. (1989) state that young women are particularly at risk of contracting BBVs/STIs for biological reasons: for instance, young women have fewer antibodies (less immunity) and their immature cervixes are more vulnerable than those of older women. The Global Sex Survey (2005) reports that globally, most of the people had their sexual debut the age of 17 thus exposing them to infection by BBVs/STIs.

In Uganda, MacLachlan (2009) ran a survey of 377 women in HIV/AIDS treatment programs, to identify women's economic difficulties and its relation to some HIV sexual risk behaviours, e.g. condom use in the last sexual encounter, having multiple sex partners and forced or survival sex in the last six months. Results indicated that: one third of women who were married women reported forced or survival sex; the majority of women reported condom used at the last sexual encounter; forced or survival sex and multiple sex relations had a relation to the number of weekly missed meals.

Negash et al. (2004) conducted a cross-sectional survey in Ethiopia to check KAP regarding HIV/AIDS among 359 individuals aged 15 and above. Half of the respondents were males and half were females. The results showed that almost all respondents had heard of HIV/AIDS from the media and had moderate knowledge about its modes of transmission; however the majority said they practiced unprotected sex; 86 percent had had their first sexual encounter at the average age of 16.6 for girls and 18.4 for boys, though for some it was at 11; condoms were not used more than a third of the time; the males had more STIs than the women, and the men had more illegal sexual relationships than the women. The authors recommend the introduction of sex education in schools before the age of ten. Similarly in Ethiopia, Fitaw and Worku (2002) ran a survey study on 383 college students to test their knowledge about HIV/AIDS and their risky sexual practices. Half of the students were sexually active, and a third these mentioned that they used condoms; a few reported using them regularly and a few said they had sex with FCSWs.

The Population Reference Bureau (2000) reports that globally there was a greater incidence of early marriage two decades ago. Now that the mean age of marriage is generally higher, women are generally healthier and better educated. In some parts of the world, though, the mean age of marriage remains low, jeopardising the health of younger women by making them more prone to infection by BBVs/STIs, as well as depriving them of education.

3.2.3.2 In the MENA region

Gańczak et al. (2007) conducted a cross-sectional survey of 119 male and 148 female young students in the United Arab Emirates (UAE) to identify their knowledge, attitudes toward HIV/STIs and PLHIV and educational needs. The study found that three quarters had poor knowledge of HIV/AIDS while a quarter had moderate knowledge and only 1% had good knowledge. Despite the fact that the majority knew the principal modes of HIV transmission, myths were still prevalent among them; a third knew that there is no vaccination for HIV and a third knew that HIV/AIDS is a disease that cannot be cured; the majority stated that Islam is a factor in the avoidance of extramarital sex, and three quarters believed that Islam helped them to avoid STIs. The majority were in favour of premarital testing for HIV, and their attitudes to PLHIV were uncompassionate and intolerant. Almost all of the young people believed that foreigners should be tested before entering the UAE and half believed that PLHIV should be segregated from the community. Only a quarter approved PLHIV children attending school, and while the majority felt that children should be taught how to protect themselves from HIV/STIs at school, the half of these believed that this was not enough. The students' major sources of information were books, the media, sex education at school and healthcare personnel. Male students were more knowledgeable than female students and female students were more interested in premarital testing and learning how to protect themselves from HIV/STIs.

Tavoosi et al. (2004) described their survey study on 4641 high school pupils to measure their knowledge and attitude to HIV/AIDS and PLHIV. Results were: the pupils said TV was their main route of information about HIV/AIDS; a few pupils were able to answer all questions about knowledge correctly, but there were many myths about modes of HIV transmission, e.g. mosquito bites, swimming pools, public toilets were claimed to be proper modes of transmission; stigmatising attitudes to PLHIV as pupils said PLHIV pupils must not attend schools. The authors stressed the significance of introducing sex education to secondary schools to provide HIV harm reduction.

In Egypt, UNAIDS (2012a) reports low knowledge about HIV/AIDS among the general Egyptian population. In addition, the latest Demographics and Health Survey (DHS) shows that 18.1% of men and only 7.1% of women aged 15-59 years in Egypt have adequate knowledge about the problem. The DHS (El-Zanaty & Way, 2009) in Egypt also points out negative attitudes towards PLHIV, with only 20% of men and 23% of women claiming to have heard about HIV/AIDS and willing to look after a relative living with HIV/AIDS. About 19% of men and 14% of women said they would buy vegetables from a grocer living with HIV/AIDS, and 9% and 13% of men and women respectively would allow a teacher living with HIV/AIDS to continue teaching at school. Knowledge is even lower among youths (15-24 years), and especially young women, with only 4.8% having appropriate knowledge versus 18.3% of young men. Consequently PLHIV are often marginalised in the conservative Egyptian culture and this social stigmatisation hinders their access to the social support and healthcare services that they need.

Egypt's NAP VCCT (2011) finds that women and girls who used NAP's VCCT services are especially vulnerable to HIV infection because they were of a lower socioeconomic class and illiterate. Fewer women present at VCCT centres than men; females accounted for 18.5% of all VCCT attendees in 2010 and 16.18% in 2011.

The Population Council of Egypt's (2010) Survey on Young People in Egypt shows that there are serious gaps in HIV/AIDS knowledge among the country's youth. The majority of those aged 10-29 have heard of HIV/AIDS, with males having heard more about it than females. The preferred channels of knowledge are the media and friends. The majority of the young people stated that HIV can be transmitted through sex, 66% believed it can be passed on via non-sterile blood, 20% via sharing needles, and 10% were aware of mother-to-baby transmission. Only 3% knew of all four major routes. The survey investigated myths about modes of transmission: 0.8% of youth believed HIV is transmitted through insect bites; 3.1% via hugging or kissing a PLHIV; and 1.6% through sharing food with a PLHIV. The survey additionally reports that a fifth of young people aged 15-29 were willing to deal with PLHIV. Respondents with more education showed less negative attitudes than those with less education, but still only a third of young people with a university education stated that they would shake hands or travel in a car with a PLHIV. Stigma leads to discrimination against PLHIV, including abandonment by their family, job loss and denial of medical care.

El-Sayyed et al. (2008b) conducted a qualitative study with 73 MSM in Cairo to explore their high-risk sexual behaviour and found that two thirds of MSM had first had sex before

they reached the age of 15; they switched roles between active and passive during the sex act; three quarters of those over 25 had sex about once a week and only a quarter of those under 25 had sex more than once a week; three quarters of the older MSM had sex with women while three quarters of the younger MSM only had sex with men. Condoms were not used 80% of the time.

UNIFEM (2007b) cites a study of women living with HIV/AIDS in Egypt conducted by the Egyptian Society for Population Studies and Reproductive Health (2007) to investigate the needs of PLHIV females in Egypt. The study shows that some women are at risk of HIV infection and become infected without knowing it until their husbands become sick or die. Even if these women become sick before their husbands are diagnosed they frequently remain undiagnosed, as some women must still request permission from their husbands to seek healthcare.

Egypt's MOH (2005) reports that cultural changes are contributing to the rapid spread of HIV alongside poor knowledge about modes of BBV/STI transmission. These changes include more liberal sexual attitudes and behaviour among the young and increased IVDU. Refaat et al. (2004) researched awareness and risk behaviour among Egyptian university students and found that a third had insufficient knowledge about HIV/AIDS and most of those who were sexually active did not protect themselves from BBVs/STIs. Their main channels of knowledge were the media and their peers, in that order.

Taking the more complex picture and gender relations into account, UNAIDS, UNICEF, WHO and USAID (2004) report many factors in Egypt that create gender discrepancies in contracting HIV. These include social acceptance of men taking multiple sex partners and sexual norms such as allowing women little or no control over their bodies, gender-based-violence, and women's limited financial means and unequal rights.

The following studies discuss the importance of sex education to youth to minimise their vulnerability to BBV/STI infection, e.g., Mueller, Gavin and Kulkarni in 2008 mentions abstinence from sex; postponing the first sex, sticking to outer sex; minimising sex partners and using condoms regularly and correctly to be taught to youth as part of sex education. Similarly Kirby, Laris and Rolleri (2007) emphasise that teaching proper sex education can have a positive influence in adopting safe sexual practices. Kirby and colleagues review several studies exploring the influence of sex education programmes, worldwide, on sexual behaviour of youth under 25 years, and clarify myths around sex education that it does not increase sexual behaviour, but only delays it.

3.3. Cultural context of risk behaviour in Egypt: religion, gender, stigma and risk behaviour

While behaviour in Egypt, influenced by MENA culture, keeps the prevalence of HIV lower than in several other regions in the world, it also has an adverse influence on PLHIV and those involved in risk behaviour through stigmatisation and social exclusion (Shawky et al., 2009).

This section reviews the evolvement of the theoretical framework via three overlapping aspects of the culture that influence risk behaviour, as shown in Figure 3.1, below.

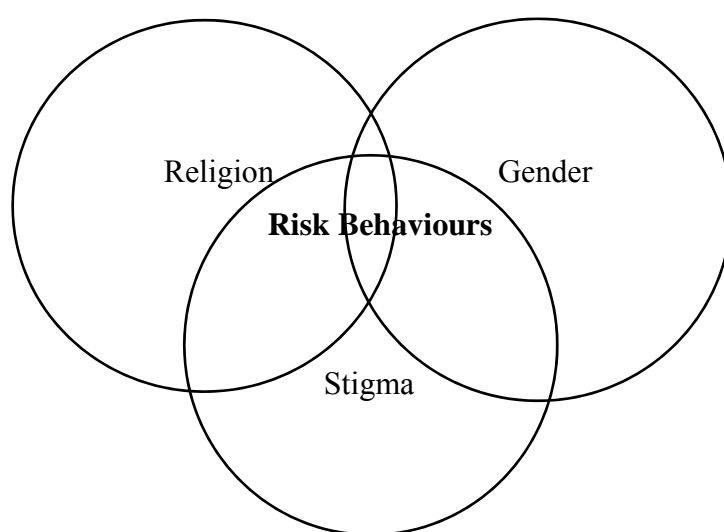


Fig. 3.1: Simplified theoretical framework showing the overlapping influences of gender, religion and stigma on risk behaviour and infection with BBVs/STIs in Egypt.

3.3.1. The role of religion

3.3.1.1. Religion, culture and HIV infection

Religion influences every aspect of the everyday life of people in the Islamic world. It is still embedded in the Middle East's male-dominated, predominantly Muslim traditional and conservative society even with all the recent shifts to more liberal sexual attitudes and behaviour among the young. Immigration, travel and increased IVDU have contributed to these changes, as discussed by Shawky et al. (2009).

Islam still has a huge influence on several traditional practices and social habits, including in the area of sexual and reproductive health. Islam says that the sexual act should be only practiced within the legal frame of marriage (Nasirian, Karamouzian & Haghdoost, 2013). Razzaghi et al. (2005) elaborates that any premarital or extramarital sex is seen as adultery in Islam, which has a grave penalty. Forced marriage, honour killings or crimes

of passion, marital rape, domestic violence, gender-based violence, female genital mutilation, polygamy and homophobia are all widespread in the MENA region, adding to the STI problem.

The following sections look at the link between culture and religion and its influence on the risk factors leading to HIV infection. Researchers into this connection in Muslim-African countries include Speakman (2012), who examines the high HIV prevalence rates in Africa and questions how the religious discourses of Islam and Christianity affect the epidemic and the future of believers. Speakman reports a negative relationship between HIV prevalence and being a Muslim in Africa, and wonders whether Islam advocates against risk behaviour more effectively than Christianity: across predominately-Muslim Northern Africa the average adult HIV prevalence rate is only 0.15% on average. Sociocultural factors such as male circumcision, which is mandatory in Muslim countries and helps to prevent infection and improve hygiene, contribute to lower HIV prevalence (Gray, 2004; Speakman, 2012).

According to Kamarulzaman and Saifuddeen (2010), taking drugs is *haram* (a vice) in Islam and is therefore prohibited; however, illegal drug use is prevalent in several Islamic countries. In the last several years there has been an increase in drug-injecting practices and accordingly an increase in HIV infection. While some Islamic countries have responded quickly, by adopting harm-reduction initiatives, other countries have been slow. The Quran and the *Sunnah* (prophetic traditions) are the major references that govern the laws that guide Muslims' everyday life and from which responses to health problems are derived.

The following picture emerges of the Egyptian context: the government claims that all Egyptian PLHIV contracted HIV through blood transfusion while in the Arabian Gulf, or through sexual intercourse abroad. This blaming of other cultural groups or nations for the transmission of the virus is a well-known government strategy for dealing with the HIV/AIDS epidemic at first (Farmer, 2006). Egyptian cultural, social and religious norms discourage undisciplined sexual behaviour, which is why the official figures are different to those estimated by the UN.

Muslim fundamentalist women support the Islamic principle of banning sex education and see HIV/AIDS as a plague originating from the 'immoral Western culture' as Soliman (1995) called it. They refuse to accept that some Egyptian men practice protected sex in Egypt, consider condoms 'immoral' and believe that God will curse a woman who refuses to have sex at her husband's wish. Despite the fact that most hospitals in Cairo and even

some rural hospitals possess equipment for HIV testing, surveillance schemes are still limited to MARPs (ibid). This situation persists, as recent research has shown (Shawky et al., 2009). Cultural and religious beliefs obstruct the provision of effective healthcare, which would signify government approval of risk behaviour on the one hand and boost such risk behaviour and the perception of it as legal on the other.

El-Sayyed, Kabbash and El-Gueniedy (2008a) conducted a study to investigate the KAP of 1256 tourism and industrial personnel in Egypt toward HIV/AIDS. Tourism staff had a significantly higher awareness of the staggering HIV/AIDS epidemic threat in the world and HIV modes of transmission, than the industrial workers. Both groups had a healthy attitude toward HIV infection through holding to religion's teachings and avoiding extramarital sex. However, the majority practiced unsafe sex.

The religious culture of Islam has an effect on gender relations and the subordinate status of women (El Saadawi, 2007). This is discussed in the section on gender because Islam and religious culture affect risk behaviour such as sexual practice and IVDU.

Another survey study in India by Lal et al. (2000) on 625 college students tested their KAP to HIV/STIs and sexual practices, with special emphasis on gender. Among the 164 recruited young men and 461 young women, data showed that: all of them had heard about HIV/AIDS; male students had better knowledge than female one and Christian students had better attitude to HIV/AIDS than students from other faiths.

3.3.1.2. Fatalism and HIV

Fatalism is a well-known aspect of Middle-Eastern and especially Islamic culture. It is a crucial topic in Egyptian everyday life, and thus also in healthcare. It influences how responsibility for and control over one's fate are perceived. Fatalism is a belief system in which humans make an effort, but at the same time do not see themselves as in control of their life or fate (Weber, 1998). Fatalism has an impact on the way in which people look after themselves, as discussed below. In Egypt, many substance users of both genders and religions, from various educational and socio-economic classes and with different sexual affiliations, have a fatalistic perspective and relate much of their substance use problem and its complications, e.g. BBV/STI infection, to it.

As Hamdy (2009) points out, there has been debate for centuries in the religious practices of *kalam* (theological debates), *aqida* (doctrine) and *fiqh* (jurisprudence). She points out that different concepts of human behaviour sway between the poles of *tawakkul* (absolute passive reliance on God's will) on the one hand and *sa'i* (active action in the world) on

the other. However, Hamdy argues that fatalism is not always a passive Muslim choice, as acceptance of the Divine Will does not contradict the concept that one must work in life. Fatalism is not strictly passive: although one relies on God, it is also necessary to work and actively do one's best in life. The Muslim tendency toward fatalism is a major obstacle to the development of science: if bad conditions are accepted as a sign of God's will, why then should the faithful develop technological means to improve them, and if illness is a test of faith, why should believers seek medical treatment? Hamdy's findings are also applicable to medical science and healthcare in Egypt, and to how my interviewees interpreted their options when seeking healthcare. Thus fatalism is not just a religious attitude; it also constitutes how people define themselves in relation to God, other people and society in an active decision-making process. As Hamdy shows in her ethnography, being fatalistic does not mean total passivity but rather choosing to be passive.

Christianity is part of the Abrahamic religions and thus of the Middle East. Fatalism thus also exists in Christian religious belief, as discussed by Zimmerman (2010). Acevedo (2008) discusses fatalism as an innate belief in Muslim societies on the part of both Muslims and the Christian minority. He argues that fatalism in the Islamic world is still not understood well and can be comprehended better in the compound context of history, culture, socio-economic status and politics, and not only religion. Christians living in the Islamic world are generally as fatalistic as the Muslim majority and sometimes even more.

3.3.1.3. Religious leaders' responses to the HIV epidemic

In the Islamic world religious leaders enjoy a great deal of respect, which is why their guidance and advice on all aspects of life are highly sought-after and appreciated, especially in cases of disease and death. Here I discuss the crucial role of religious leaders' response to the HIV epidemic.

Saddiq et al. (2010) suggest that encouraging HIV preventive initiatives on the part of medical personnel in the Islamic world to enable men and women to increase their resilience to HIV/AIDS should also involve religious and community leaders.

Maulana, Krumeich and Van Den Borne's (2009) study in Lamu, a Muslim community in Kenya, found that on the one hand stigma associated with sinful behavior impedes PLHIV's safe access to needed care. On the other hand, abiding by religious values such as abstinence is considered the cause of the low HIV infection figures in the community. Maulana and colleagues (ibid) investigated the effect of using Islamic verses and texts

that encourage harm reduction and safe sex as a basis for tackling HIV infection and HIV-related stigma in this Muslim community. The study also explored the role of the Muslim religious leaders in introducing health promotion to their followers in mosques against sinful sexual practice. The verses and the religious leaders were highly influential in health promotion in the community.

To emphasise initiatives to promote the efforts of religious leaders in response to HIV/AIDS, the UNDP's HIV/AIDS Regional Programme in the Arab States (HARPAS) (2009) describes how the stigmatisation of and discrimination against MARPs and PLHIV impede the prevention and treatment of HIV/AIDS in MENA. Recruiting influential religious leaders is pivotal to the approach to the HIV/AIDS problem. The HIV prevalence rate cannot be kept low unless the Arab world tackles its social taboos such as same-sex relationships. Arab Ministries of Health have become concerned; most Arab MARPs avoid seeking medical services due to shame and the fear that they will be rejected, humiliated or imprisoned. The notion that the Arab world has so far managed to escape the global HIV/AIDS epidemic due to its religious and cultural restraints on sexual behaviour was rejected by the UN in 2007. HIV/AIDS training kits developed by and for Arab religious leaders have been developed by HARPAS so that the Arab sub-regions could receive culturally-tailored training courses. Another major network of faith-based organisations (FBOs) dealing with HIV/AIDS, Religious Groups in the Arab World Network against AIDS (CHAHAMA), was launched in Cairo in 2006 with the aim of bringing hundreds of male and female Muslim and Christian religious leaders together to network and plan new methods of reaching out to MARPs and PLHIV. Sub-regional workshops were also held to address further issues such as transient (temporary/volatile) marriages, harm reduction and reaching out to MARPs.

According to Gilbert (2008), few studies have attempted to identify Islam's influence on HIV prevention. Senegal, with the lowest HIV infection figures in SSA, has involved Muslim religious leaders in its prevention initiative for more than ten years. Gilbert's study explores Islam's effect on HIV prevention by testing whether the Senegalese participants' religiosity scores explained their high-risk sexual behavior, condom use and substance use and found that participants with higher religiosity scores were more likely to refrain from practicing illegal sex. However, these participants reported that they did not use condoms when they were sexually active.

Hasnain (2005) argues that Muslim countries, which were earlier seen as protected from HIV/AIDS due to their conservative cultural and religious norms, are currently facing a

rapidly rising HIV threat. Since sexuality is taboo as a topic for discussion, harm reduction as a practical approach to HIV prevention is still greatly underused. Hasnain estimates the extent of the HIV/AIDS problem in Muslim countries and the major challenges this poses for the administration of HIV prevention and treatment within an acceptable cultural approach. Recommendations for such an approach include working with religious leaders as key collaborators, incorporating HIV prevention and treatment techniques within existing social, cultural and religious norms, and providing appropriate healthcare facilities and infrastructure for HIV prevention and treatment programmes.

Winter (1996) reports that Mauritania, an Arab Muslim country in West Africa, remains one of the few African countries that refuses to publish HIV/AIDS statistics. Condom distribution in Mauritania targets only married women through family planning clinics and some pharmacists refuse to sell condoms to single people. Factors that encourage the spread of HIV include widespread migration for trade purposes and frequent divorce and remarriage. To curtail the spread of HIV, one NGO has recruited an imam who explains to the public that condoms are distributed to fight HIV infection rather than to encourage sexual loose undisciplined behaviour. Ali (1996) suggests that advocacy based on religion for harm reduction, compassion and the acceptance of PLHIV is a flexible new initiative in many Muslim countries, despite the prevailing S&D against PLHIV.

3.3.2. Gender and sexuality

3.3.2.1. Gender inequity and the power imbalance

There is no doubt that the gender imbalance and the resulting vulnerabilities play a role in how sexually-transmitted diseases are dealt with. Researching vulnerability to HIV in Uganda, Mbonye et al. (2012) investigated women's experiences of gender relations from childhood to adulthood including parental neglect and violence at home and at school, and how such experiences may push them into commercial sex work. Police brutality, harsh clients and substance use are also reported. Many women are unable to negotiate the use of condoms with their clients.

UNAIDS (2008) reports that the promotion of gender equality and the empowerment of women are crucial in the effort to minimise HIV vulnerability in the Arab world. Gender influences equal access to healthcare facilities, as Pinkham and Malinowska-Sempruch (2008) record. It also influences substance use: harm-reduction services exclude women via discriminatory policies and social stigmatisation and discrimination frighten female substance users away from healthcare services, as confirmed by Theobald, Tolhurst and

Squire (2006), who found that gender and poverty lead to differences in vulnerability to disease.

The gender imbalance is replicated by the attitudes of healthcare personnel and the police, according to Silvester et al. (2006). Healthcare personnel sometimes intimidate poor and vulnerable women, especially female PLHIV, preventing them from using healthcare facilities.

DeJong et al. (2005) point out that many other factors also augment women's vulnerability to HIV including temporary marriage, poverty and travel, and that young people still lack efficient tools with which to protect themselves against BBVs/STIs.

The impact of the gender imbalance in the Islamic world has been the subject of feminist and gender studies for a long time. The famous Egyptian feminist Nawal El Saadawi has published widely on the issue, bringing it to the forefront of social awareness in Egypt (e.g. El Saadawi, 2007).

The spread of HIV infection is also influenced by working conditions and access to services and markets. These factors tend to be overlooked in research on gender differences in the infection rates; however, vulnerability to infection goes beyond sexual behaviour and is also affected by factors such as inheritance laws, legal protection and civil status (Seeley, Grellier & Barnett, 2004).

The intersectionality of gender relations and social stratification with vulnerability to BBVs/STIs is also apparent among young people and members of lower social classes. For instance Aggleton, Chase and Rivers (2004) argue that certain groups of young people across the world are especially prone to HIV infection because of their sex, age and social status. While young people in general claim that they know how to protect themselves and their partners against HIV infection, certain subgroups are particularly at risk, e.g. young IVDUs, young FCSWs, young MSM and young women forced to practice sex. Some women's low social class may prevent them from controlling their sexual relations, as mentioned earlier. For many young women, unlike men, their first sexual act is within marriage, and women are encouraged to wait for marriage before having sex. Many young women marry older and more sexually-experienced polygamous husbands, increasing the risk of infection at an early age when they are biologically most prone to BBV/STI infection, as mentioned. The authors argue that in most countries masculinity is linked to physical and psychological strength and sexual activity is proof of these, and that these

masculine values are based on cultural and peer pressure, in contrast to the expected women's more caring femininity symbolised by virginity, fidelity and fertility.

Khan (2004), researching Pakistan, describes what he calls a 'culture of obedience': women living in obedience to their husbands, fathers, brothers and male relatives, which prevents them using healthcare facilities. This was acknowledged at the 2000 UNAIDS Expert Group meeting on the HIV/AIDS Pandemic and its Gender Implications, where it was argued that in many societies there is a culture of silence around sex that implies that the pure and innocent woman is expected to be ignorant about sex and passive in the sexual act. This makes it hard for women to be informed about risk reduction and negotiating safer sex. Accordingly, accessing STI treatment services can be highly stigmatising for adolescent girls and adult women. This power imbalance affects gender relations, sexual interactions and women's use of treatment services. In many societies women are socially deserted, marginalised and even killed after notifying their partners of their HIV seropositivity.

Lester et al. (2004) reveal that lack of guaranteed privacy for the protection of female substance users impedes their contact with health institutions and their disclosure of their substance use.

3.3.2.2. Gender differences in sexual and drug-taking behaviours

Men and women approach commercial sex differently. Mbonye et al. (2013) carried out a qualitative study in Uganda on women at high risk of contracting HIV. Of the 101 women studied, 67 were active FCSWs, of whom 31 were PLHIV. The women had above-primary-level education but faced challenges in their commercial sex work, e.g. exposure by the police, social stigmatisation, and alcohol use leading to poor decisions such as agreeing to unsafe sex, as condom use depends on the client's preference and the price paid. Research on Tanzanian men and women showed that drugs are often used before or during sex.

Men and women also use drugs differently. Women may use drugs before sex as a means of dissociating themselves psychologically during sex work, while men take drugs as a sex enhancer (Williams et al., 2007). UNAIDS (2006) reports studies in several countries which show poor condom use by IVDUs during sexual encounters with FCSWs, casual partners and other IVDUs, rendering them vulnerable to HIV infection. The evidence shows a close relationship between sexual practice and intravenous injection-related risk of contracting HIV. Most IVDUs are sexually active, and many engage in sexual

behaviour that raises their HIV risk (Monitoring the AIDS Pandemic, 2001, 2005a, 2005b).

UNODC (2006) reports on the increasing number of female substance users in danger of infection by HIV. In developing countries female substance users are still overshadowed by men who use drugs as male IVDUs definitely lead female IVDUs into injecting drugs intravenously. Over the past few years HIV prevalence in Pakistan has taken the form of a concentrated epidemic among IVDUs and MCSWs. This is all due to needle-sharing and lack of basic sex education (Khan, 2006).

In Egypt, Hamdi et al. (2013) conducted a survey study on 44,000 individuals to identify the prevalence of substance use and its sociodemographic associations. The results of the questionnaire, based on the Addiction Severity Index, showed that the prevalence of substance use in males was 13.2% and in females, 1.1%; substance use was more common among youth aged 15–19, among male Bedouins and in coastal governorates, and was associated with low level of education; cannabis (hashish and marijuana) were the most widely used drugs; the real substance-use figures remain unknown due to underreporting; drugs are highly available and accessible in the country; and substance use in Egypt was higher in 2013 than in 1996 but still lower than in the West.

Global AIDS Response Progress Reporting (2012) states that according to Egypt's national statistics HIV was widespread among the most productive members of the country's population in 2006, with 89% of PLHIV aged 15–49. Infected females made up around one fifth of the whole, with more females than males in the 20–34 age group.

3.4. Stigma and discrimination

3.4.1. Definition: Individual, social, cultural and moral aspects

It is a well-known fact that stigma is conceptualised from the individual and the social perspective (Stangl et al., 2013). Stangl et al. (ibid) cite Goffman's (1963) classic account in which he describes how stigma creates a deeply disgracing gap between who we think we are, i.e. our actual social identity, and how we are perceived by others, i.e. our virtual identity in society. Goffman calls this a 'spoiled identity' which segregates the stigmatised person from the stigmatising society; the intolerant world sees her or him as untrustworthy.

Kleinman and Hall-Clifford (2009) contribute to this discussion, arguing that the concept of stigma has changed dramatically since its initial definition by Goffman in 1963. While

Goffman wrote about the whole of society, it is now mostly used in the analysis of illness and disorders and in the subsequent impact this has on providing good healthcare. Goffman originally stated that individuals who are seen as inflicting disease upon themselves through substance use or sexual activity are the most stigmatised. Their families and friends may be stigmatised by association, e.g. rejected, ejected, denied protection under the law and treated as 'less than human' because of their 'spoiled identity' (Goffman, 1963). Kleinman and Hall-Clifford argue that the study of stigma has focused largely on the psychological approach, neglecting how stigma and stigmatised individuals are defined within moral contexts. Yang and Kleinman (2008) calls stigmatisation a 'moral experience' and argue that the stigmatised individual is a person with a moral status that is different to other people, more visible. The stigma makes their 'moral failings' more visible to the community. Maintaining social status relies on certain social obligations, and the stigmatised are not able to comply with these requirements and thus fall short on their moral status in their communities. Hence stigmatisation delays the individual's ability to obtain and keep what matters most to them, which often is financial security and relationships.

Link and Phelan (2001) also update Goffman's account of stigmatisation. They call stigmatisation a 'harmful societal phenomenon' which feeds on various social, political and economic powers. The phenomenon begins when the difference between the stigmatisers and the stigmatised is labelled, and then this difference is linked to negative stereotypes which eventually lead to the segregation of the stigmatising 'us' and the stigmatised 'them'. This finally leads to loss of status on the part of the stigmatised and their being discriminated against by the rest of the society (Stangl et al., 2010; Stangl, Brady & Fritz, 2012).

Parker and Aggleton (2003) describe how stigmatisation is used to establish relations of power and control and to emphasise inequities, e.g. based on gender, sexual affiliation, socioeconomic class, race and ethnicity. Gilmore and Somerville (1994) describe discrimination as any negative type of distinction, exclusion or restriction affecting an individual based on a personal criterion. Discrimination is the end result of stigmatisation, and is better described as 'enacted stigma', as Jacoby (1994) and Malcolm et al. (1998) explain.

Similarly, Kleinman et al. (1995) argue that disease-related stigmatisation varies according to time and place. Stigmatised persons might refrain from seeking medical help and conceal their illness because they are aware of the taboo in their community. They

often resort to denial and believe they are ‘morally tainted’ or ‘a mortal danger’ to the community, as Kleinman and colleagues describe it. Avoiding medical advice exacerbates their medical condition, rendering them an active source of possible infection to others and, for many, turning something that might be treatable or curable into a condition leading to premature death.

Stigma is a major theme in any research on HIV/AIDS, and stigma, prejudice, hatred and discrimination are all discussed in the literature. As Cox et al. (2012) state, enacted social stigma varies geographically from region to region depending on social and cultural norms. Cox et.al. (ibid) also show that stigmatised individuals often face prejudice, which causes depression and low self-esteem and jeopardises their social identity.

3.4.2. HIV-related stigma

This section presents the literature on different types of stigma from different angles, as a complication of substance use.

People living with HIV/AIDS are amongst the most stigmatised subgroups, in general and in any healthcare setting, as much research has shown. Mbonye et al. (2013) argue that stigma is an obstacle to HIV prevention and treatment and that there is minimal understanding of the enacted stigma imposed upon PLHIV taking ARV medication. Strategies adopted by PLHIV to deal with this prejudice include withdrawing from public life, quitting work and moving in with relatives due to their progressive illness.

Stangl et al. (2010) explain that the stigmatisation process can be broken down into specific areas that could be tackled by specific programmatic and policy efforts: drivers, facilitators, intersecting stigmas and manifestations of stigma. The drivers of stigmatisation are the factors working at the level of the individual, e.g. lack of awareness of the stigma and its harmful consequences; fear of contagion with HIV through day-to-day contact with PLHIV; fear of negative economic consequences due to the presence of PLHIV in society; intolerance; and fixed perceptions of PLHIV and MARPs (Nyblade et al., 2003; Hong, Van Anh & Ogden, 2004; Ogden & Nyblade, 2005; Mahendra et al., 2007). The facilitators are factors working at the societal level which have a positive or negative effect on the process of stigmatisation; e.g. protective or disciplinary laws; complaint-handling systems; awareness of PLHIV’s human rights; cultural – and especially gender – norms; community support for PLHIV; and the power or powerlessness of PLHIV to face stigmatisation (Reidpath & Chan, 2005; Nyblade 2006; Stangl et al., 2010; Loutfy et al. 2012). Logie (2013) state that intersecting or layered

stigmas identify the several types of stigma that people face due to their HIV seropositivity, gender, occupation, migration, substance use and sexual affiliation. Manifestations are the instant negative results of the stigmatisation of individuals or groups, including anticipated stigmatisation; fear of stigmatisation if HIV seropositivity is disclosed (Quinn & Chaudoir, 2009); perceived stigma, i.e. perceptions of how PLHIV are treated (Zelaya et al., 2012); internalised stigma (Rao et al., 2012a); shame (Burris, 2008); experienced or enacted stigma (Mahajan et al., 2008; Earnshaw et al., 2012); discrimination, i.e. experiencing stigmatising behaviours which are justified by law; and resilience, i.e. the ability to face and overcome stigma and threats (Stangl et al., 2010; Earnshaw et al., 2013).

Stangl et al. (2010) find that people internalise the immediate negative effects of stigmatisation, which has an impact on their self-perception and self-esteem as they integrate the stigma with their perception of themselves. The social environments in which individuals live and work have an impact on the drivers and manifestations of stigma (Mahjan et al., 2008; Earnshaw et al., 2012). McLeroy et al. (1988) state that the socio-ecological framework that identifies the effect of social norms and structures on a person's attitudes and behaviours also clarifies the key levels at which efforts can be made to reduce stigmatisation working at different levels: the individual level, i.e. the stigmatised individual's knowledge, attitude and skills; the interpersonal level, i.e. involving the individual's family, friends and social networks; the organisational level, i.e. the organisations, social institutions and workplace with which the individual interacts; the community level, i.e. local cultural values, norms and attitudes; and the level of public policy, i.e. national and local laws and policies (Heijnders & van der Meij, 2006).

Jugdeo (2009) researched the AIDS stigma in the workplace, focusing on stigmatised individuals. The families and friends of most of the participants who had disclosed their illness to them had rejected them; other participants were understandably afraid to disclose their HIV seropositivity. In the workplace most employees refrained from revealing their seropositivity to managers or colleagues. All the participants believed that others see PLHIV as unclean, and many mentioned facing stigmatising behaviour. As part of their coping process some HIV-infected employees had simply walked away from their jobs when faced with stigmatisation.

In HIV/AIDS stigma theory researchers often distinguish between the stigmatisation of those whose own conduct leads them to infection and innocent victims, e.g. wives of male

PLHIV and recipients of contaminated blood products (Keusch, Wilentz & Kleinman, 2006). The HIV-related stigma is thus complex: infected persons suffer a multitude of stigmas which potentiate one another and lead to even greater prejudice.

Ogden and Nyblade (2005), in their report for the International Center for Research on Women, cite UNAIDS' (2003) definition of HIV-related S&D as a 'process of devaluation' of PLHIV and people associated with HIV/AIDS. This stigma frequently originates from the deep-rooted stigmatisation of the two major modes of HIV transmission: sex and intravenous substance use. Discrimination (enacted stigma) entails unfair or unjust behaviour aimed at the stigmatised individual, for instance via distinction or segregation on the basis of her or his true, perceived or anticipated seropositivity or membership of a particular group such as MARPs. Stigmatisation augments existing inequities and prejudices, and is especially detrimental to marginalised and under-served subgroups such as IVDUs, MSM and FCSWs (Link & Phelan, 2001; Parker & Aggleton, 2003).

Kaadan (2004) emphasises that although HIV/AIDS is globally stigmatised it is clear that this stigma is amplified in Islamic countries for cultural and religious reasons. Consequently for any anti-stigma campaign to succeed it should be based on Islamic concepts applied with the involvement of religious leaders, especially in educational programmes.

We can thus conclude that stigmatisation is an ongoing challenge that impedes simultaneous action at the community, national and global levels. This is due to poor understanding of the processes in which stigma is enacted and experienced, which is a consequence of the complexity and diversity of S&D.

3.4.2.1. Stigma and discrimination in different contexts

The key social contexts influencing HIV-related stigma in Egypt are the family, healthcare facilities, religious institutions, the law and the police. These social aspects of stigma also have internal counterparts.

HIV-related S&D extend to the families, neighbours and friends of PLHIV, magnifying the social isolation of their partners and children as well, as Parker and Aggleton (2002) report. Aggleton and Warwick (1999) emphasise the importance of family as the major provider of support for PLHIV in most developing countries, and thus a family's negative attitude to a member living with HIV/AIDS is detrimental. Bharat and Aggleton (1999) list families' negative responses as blame, rejection, ejection from the family home, and

even depriving a PLHIV of his or her children. Relatives reject family members living with HIV/AIDS because of their fear of infection and because HIV/AIDS is associated with loose and undisciplined sexual behaviour, same-sex relationships and substance use (Mujeeb, 1999). Terto (1999) argues that even with a positive family response to a PLHIV, fear of the community's S&D may prevent him or her disclosing this seropositivity at home. Nardi and Bolton (1991) point out that HIV-related S&D in families often takes the form of scandalising and scapegoating.

The following studies display the intense S&D against PLHIV within healthcare facilities found in different parts of the world regardless of culture. In India the S&D took a harsher form such as burning PLHIVs' beds after their discharge, dismissing them in the middle of their treatment with the excuse of needing to cut medical costs, disclosing their HIV test results to their relatives and shaming them openly (Mahendra et al., 2007). In South Africa, PLHIV grind their ARVs to powder to avoid people's curiosity about what pills they are taking regularly to maintain their confidentiality, jeopardising their adherence to the ARV regime and exposing themselves to potential drawbacks such as developing a resistance to the medication (Mills, 2006). Wolfe et al. (2006) in Botswana and White and Carr (2005) in Jamaica mention that HIV-related S&D often compel people who want to use VCCT services to defer it until it is too late and the disease is terminal. A study in Tanzania by the Tanzania Stigma-Indicators Field Test Group (2005) found S&D in the attitudes and behaviour of healthcare personnel which included intended neglect of PLHIV's medical care, refraining from treating PLHIV, breaching their confidentiality, disclosing their HIV testing results without their consent, gossiping behind their backs about their condition, and verbal harassment. Another study in Ethiopia by the same group in 2004 included frankly writing the diagnosis of HIV seropositivity on patients' bed charts for everybody to see, avoiding caring for PLHIV, verbal abuse, and the referral of PLHIV to other institutions without offering them counselling about their seropositivity or helping them to assimilate the diagnosis and decide on their next steps. A study by Adebajo et al. (2003) discusses the moral judgment of the nurses and laboratory technologists in their study in Lagos, Nigeria regarding PLHIV seeking care. The S&D took the pattern of condemning PLHIV as morally corrupt and hence deserving of their HIV infection; only half of the studied sample agreed to have a PLHIV colleague at work or visit PLHIV for fear of contagion. The same occurred in Mexico; a survey by the National Institute of Public Health of Mexico (2004) reports that three-quarters of the sampled staff in health facilities stated that PLHIV are responsible for their HIV infection

because of their loose and undisciplined behaviour. Niang et al. (2003) and Ford et al. (2004) report their research results in Indonesia and Senegal respectively, where they found that MARPs such as MSM and IVDUs either refrain from or put off seeking healthcare for fear of being openly shamed and discriminated against by healthcare staff. There is a lack of respect for PLHIV's privacy and anonymity: they are labelled and their seropositivity disclosed to their families, media and the police without their consent (Bharat, Aggleton & Tyrer, 2001). Gostin and Lazzarini (1997) report examples of S&D including obligatory HIV screening and testing, mandatory notification of HIV-seropositive cases to family, denial of PLHIVs' right to anonymity and confidentiality, banning them from certain occupations, detention and isolation, and deliberately refraining from treating them. Cole, Zhang and Chen (1993) list some of the causative factors of HIV-related S&D as lack of proper knowledge of the disease, poor ethical attitudes and the misconception that treating PLHIV is useless, as PLHIV are dying anyway because HIV/AIDS is an incurable disease.

Within religious institutions religious leaders strengthen HIV-related stigma by using their influence to maintain prevalent myths and negative attitudes to MARPs and PLHIV rather than challenging them (Parker, 2000). Existing interpretations of religious doctrines and moral and ethical positions regarding sexual behaviour and homophobia all imply that PLHIV are sinners and deserve punishment from God.

Watney (2000) calls the failure of governments to protect PLHIV's human rights through the judiciary system and the police service 'discrimination by neglect'; for its failure to provide proper prevention, treatment and care for MARPs and PLHIV through new legislation and the strengthening of existing legislation. There are reports of killings of PLHIV in Ethiopia (AFAO, 1997), attacks on MSM in various countries (Public Media Centre, 1995) and hostility toward FCSWs in Brazil (Daniel & Parker, 1993). Kegeles et al. (1989) mention that some cultures consider contracting HIV the PLHIV's own mistake and that PLHIV alone should bear society's blame for their undisciplined and deviant behaviour. Kirp and Bayer (1992) report that HIV-related S&D are commonly justified as protecting the rights of the majority, and have resulted in laws protecting the welfare of the majority and stigmatising the minority.

Internalised stigmatisation compels PLHIV to isolate themselves. They feel that they no longer belong to their community and do not want to expose themselves by attending community healthcare services. This can lead to premature death by suicide in severe cases (Gilmore & Somerville, 1994). Daniel and Parker (1993) suggest that the manner

in which HIV-related S&D manifests relies on the degree to which people disclose their sexuality and seropositivity, and on the support of family and society. There is a link between HIV-related stigma and pre-existing targets of stigmatisation and discrimination such as race and ethnicity, gender, sexuality and socioeconomic class. Even where the law protects PLHIV's human rights, very few PLHIV dare to sue their violators for fear of scandal and further hostility or aggression.

3.4.2.2. Efforts to reduce HIV-related stigma

- **Global**

Stangl et al. (2013) cite Schwartländer et al. (2011) and Dai et al. (2013), who stress the recent shift in the global response to HIV/AIDS, and biomedical prevention that should include pre-exposure prophylaxis, global VCCT services and treatment and voluntary male circumcision (practiced routinely in MENA countries due to prevailing Islamic culture). Effective social interventions to reduce HIV-related S&D can help to make biomedical prevention work. Thus there is an urgent need for these interventions to be included in national strategies for reducing HIV-related S&D (Stangl et al., 2010; Schwartländer et al., 2011; Earnshaw et al., 2013). Stangl et al. (2013) stress that there is still lot to be done to include stigma- and discrimination-reduction techniques in national HIV/AIDS responses. Research into HIV prevention should be aware of the significance of the stigma in the response to HIV/AIDS rather than avoiding it. Courage is needed to design and evaluate interventions that tackle the different domains of stigma at multiple levels. Achieving efficient biomedical interventions on a national level, e.g. ARVs as prevention, is dependent upon removing social obstacles to ARV uptake and adherence. Thus HIV-related S&D should be at the heart of the HIV/AIDS response. This priority should be addressed via funding, policy, research and programmes addressing such S&D (Grant et al., 2010; Cohen & Baden, 2012; Tanser et al., 2013).

Efforts are being made around the world to reduce HIV-related stigma. HIV-related S&D are recognised globally as significant obstacles to the prevention, care and treatment of PLHIV (Grossman & Stangl, 2013). Stangl et al. (2013) systematically reviewed interventions addressing HIV-related S&D from 2002 to 2013. They found that they hinder the prevention of new infections and the involvement of PLHIV in all types of initiatives for harm reduction, care and treatment. Several studies have found an association between HIV-related S&D individuals' avoidance of taking an HIV test and non-disclosure of seropositivity, and poor biomedical prevention efforts (Brou et al., 2007; Abdool Karim et al., 2008; Bwirire et al., 2008; Deribe et al., 2008; Byakika-

Tsuime et al., 2009; Turan et al., 2011). Similarly, felt stigma has negative repercussions when the stigmatised person believes that he or she fits the stigmatising expectations of others and that they are actually justified in their judgement; this is a well-known obstacle to adherence to ARVs (Corrigan & Penn, 1999; Corrigan & Watson, 2002; Rintamaki et al., 2006; Sabin et al., 2008; Dalmini et al., 2009; Johnson et al. 2009; Rao et al., 2012b). Healthcare personnel also demonstrates stigmatising attitudes, as Nyblade et al. (2013) show. They show how HIV-related S&D in the healthcare domain pushes people away from using healthcare services for HIV prevention, treatment and care. Several studies from different countries across the world have shown that there are three major causes of HIV-related S&D: healthcare personnel's lack of awareness of their own stigmatising behaviour and its unacceptability; fear of catching HIV from PLHIV due to this limited knowledge about it and its modes of transmission; and the immoral behaviour that is linked to HIV/AIDS. HIV-reducing interventions in healthcare institutions should also tackle the stigma on three levels: individual, environmental and policy. Nyblade et al. argue that reducing stigmatisation in this way will lead to long-term benefits for both PLHIV and HIV-seropositive healthcare workers. It is sad that healthcare settings are an arena for stigmatising and discriminating against PLHIV, and managers working in the healthcare system should prioritise reducing HIV-related S&D. However, stigma is not withdrawing the enough attention for interventions in low-income countries such as Egypt, in spite of its devastating physical and mental drawbacks (Green & Platt, 1997; Surlis & Hyde, 2001; Khakha, 2003; Mahendra et al., 2006; UNAIDS, 2007). Nyblade et al. cite Mahendra et al.'s (2007) study of hospital workers in India which found that the personnel who were in favour of the stigmatising attitudes and discrimination imposed on PLHIV in the hospital were also the ones who had incorrect beliefs about the modes of HIV transmission. With regard to interventions that focus on the individual, environmental and policy levels, I discuss the individual, then the environmental and then the policy levels below.

At the individual level: Nyblade et al. (2009) say that at the individual level the first steps in a stigma-reduction strategy are raising awareness about stigma and its drawbacks for PLHIV, e.g. decreased quality of care and PLHIV's reluctance to disclose their status and adhere to ARVs. Healthcare personnel's fears, delusions and myths about the disease, e.g., fear of contagion through day-to-day contact with PLHIV leading to unnecessary S&D, should be properly tackled. Successful techniques would include educating healthcare personnel about HIV/AIDS epidemiology and dealing with the linking of

immoral behaviour to HIV/AIDS and the shame and blame to PLHIV. Involving all staff members with whom PLHIV deal, such as administrative staff, in training and policymaking is crucial to create a unified response from the healthcare domain. Emphasising that PLHIV are human beings and not just reservoirs for transmitting the virus and involving PLHIV that are under-served, marginalised subcategories of MARPs would make it easier for healthcare personnel to appreciate the stigma attached to PLHIV and its effects on their wellbeing.

At the environmental level: Efficient programmes need to ensure that healthcare workers are equipped with proper information about universal precautions against the transmission of the virus and with all necessary supplies such as gloves, gowns and disinfectant to prevent occupational exposure to HIV and overcome the stigma based on fear of contagion (Nyblade et al., 2009).

At the policy level: Nyblade et al. (2009) stress that the lack of specific policies for the care of PLHIV boosts healthcare workers' discrimination against them. To be successful, these policies should be participatory in nature, should clearly target healthcare staff, who should be routinely monitored. Participatory approaches such as FGDs, games and role play help to provide a non-condemnatory atmosphere in which one may realise her/his principles and actions. Anti-stigma policies should include periodical monitoring for stigmatisation in healthcare staff's attitudes and behaviour.

A study by Hodgson et al. (2012) in Uganda explores the role of networks working with PLHIV to abolish stigma. They accomplish this by improving the community's perception of PLHIV and supporting positive living with HIV/AIDS, for instance by enhancing PLHIV's self-perception and empowerment so that instead of despairing they learn to explain their disease to society. This research matches other studies, such as those of the International HIV/AIDS Alliance (2009), Odhiambo and Gatua (2008) and USAID (2007), which highlight the role of PLHIV networks in minimising the stigma, promoting counselling, helping PLHIV to share their experiences and learn from each other and encouraging them to generate income for themselves and their households. The authors recommend that MOHs promote the principle of the greater involvement of people living with HIV (GIPA) in HIV prevention by introducing approaches to reducing HIV-related stigma in government ministries and helping CSOs to empower PLHIV so that they can claim their rights, and by advocating positive changes to laws and policies that protect PLHIV's rights. By involving PLHIV networks in the national HIV response in all arenas and providing financial aid to volunteer organisations working with PLHIV networks,

MOHs provide more support than before for HIV/AIDS healthcare facilities, adding credibility to their professionalism and recognition and better sustainability of care.

Nyblade (2006) argues that HIV-related S&D were identified in the early days of the HIV/AIDS pandemic; however it is only in recent years that awareness of this key issue has arisen in developing countries. The expansion of the concept of HIV-related stigma is crucial to the creation of any HIV prevention and treatment efforts, and has added to knowledge about stigma (Bond et al., 2003; Horizons, 2003; Horizons, SHARAN & Population Council, 2003; Nyblade et al., 2003; Policy Project, 2003; Asia Pacific Network of People Living with HIV/AIDS, 2004; Banteyerga et al., 2004; Boer & Emons, 2004; Kalichman & Simbayi, 2004; Mbwambo, et al., 2004; Morrison, 2004). Therefore it is essential to define appropriate measures for clarifying and identifying the complexity of HIV-related stigma to enable better evaluation of the influence of stigma-prevention programmes.

Nyblade and her colleagues (2003) conducted qualitative research in three African countries, and shed light on the way that relatives almost always granted care to a PLHIV, although the pattern and quality of that care varied. Care was frequently tainted by stigmatisation in the form of judgement, punishment, open shaming and physical abuse. In many cultures, such as in the MENA region, women's care for their sick relatives is taken for granted. Nyblade et al. explain that HIV-related stigma is frequently built above pre-existing stigmas, especially toward MARPs, e.g. FCSWs, IVDUs and MSM. This is necessary for the design and evaluation of stigma-reducing interventions. Programs aiming to reduce stigma need to be able to identify its main causes (Ogden & Nyblade, 2005).

Ogden and Nyblade's (ibid) report cites Alonzo and Reynolds (1995), who state that HIV-related S&D have long been recognised as major hindrances to efforts towards the prevention, care, and treatment of HIV/AIDS. However, little has been done to combat the S&D. Reasons for this include policymakers believing the stigma to be 'hard-to-identify or measure and too cultural, too context-specific and too sensitive' to handle (Alonzo & Renolds, 1995). Ogden and Nyblade's report is a synthesis of the findings of studies conducted in Zambia, Tanzania, Ethiopia and Vietnam, and reveals that stigmatisation is much than previously perceived, as Ogden and Nyblade call it. The authors reveal more similarities than differences across contexts with regard to the causes, forms and consequences of stigmatisation, which has a positive influence on opening doors to stigma-prevention efforts.

Olfson et al. (2002) stress that the ability to comprehend and produce influential techniques for overcoming stigmatisation is limited, and most stigma research fails to handle this crucial issue. More effective and measurable anti-stigma interventions could be produced by focusing on the values in people's lives that affect the stigma.

Parker, Easton and Klein (2000) state that individual psychological approaches alone cannot transform S&D; efforts to alleviate environmental pressures should be complemented by social efforts such as public talks about PLHIV, and educational programmes.

Stoller (1998) elaborates on how efforts to strengthen stigmatised/marginalised groups' resistance to S&D and oppression by their communities should be prioritised. For instance the GIPA principle advocates the active involvement of PLHIV in government ministries and CSOs in an effort to empower themselves and others, encourage positive community perceptions of PLHIV and support PLHIV NGOs and their networks. This all enables PLHIV to demand respect and the endorsement of their existence and rights, and to push for changes in policy and the law: for example FCSW's unions decry police brutality and persecution; MSM NGOs play a pivotal role in advocating for access to antiretroviral drugs therapy; and women's NGOs advocate for changes in widows' inheritance rights. The authors recommend that this should all be in parallel with efforts to transform attitudes to PLHIV, for instance through media campaigns advocating tolerance and compassion.

Theobald et al. (2011) suggest creating a public place that accommodates a dialogue on sexual and reproductive health in conservative communities. Collaborations should be built between stakeholders concerned with sexual minorities, academics, NGO personnel, activists, healthcare workers and media personnel. Indeed, analogous efforts are emerging in Egypt including all of these stakeholders.

- **In the MENA region**

Lohiniva et al. (2015) mentions many studies in the MENA region emphasising the harsh S&D that PLHIV are being subjected to in their daily life, such as in Somaliland by Abdi et al. (2013), in Yemen by Al Iryani et al. (2009), in Saudi Arabia by Badahdah (2010), in Libya by El Gadi et al. (2008) and in Pakistan by Farid-ul-hasnain et al. (2013).

Badahdah et al. (2009) in Yemen point out that research on the social and behavioural aspects of HIV/AIDS in the Arab world is relatively scarce, even though HIV-related S&D are particularly significant. One critical barrier to such research is the absence of an

Arabic research tool. Badahdah and colleagues have addressed this gap by developing and applying their 'Arabic AIDS Stigma Scale' to explore HIV-related stigma and the role of HIV transmission, personal fear of HIV infection and cultural degrees of religiosity on a continuum between the positive and negative extremes. The data, collected from 277 female college students in three Arabic cultures – Kuwait, Bahrain and Jordan – demonstrate that shame at having a PLHIV relative is a very good predictor of the stigma attached to PLHIV in all Arabic cultures. The severest expression of shame was found among Kuwaiti participants.

Several countries such as Oman and Egypt provide a confidential anonymous telephone hotline on SRH and HIV/AIDS to help PLHIV to cope with their disease and empower them to live positively. However, Oman NAP (2006) found that the hotlines were not helping as many individuals as they might.

Milder and Novelli (1992) describe the ethical, social and clinical issues of HIV/AIDS in Qatar. Qatar's National AIDS Committee educated medical personnel and the public via audiovisual and printed media. Professional staff managed weekly HIV clinics caring for PLHIV and screening immigrant workers. The Committee had long advocated for PLHIV on sensitive vital issues such as school attendance, divorce, imprisonment, and healthcare personnel's reluctance to give PLHIV the care they need. The cultural hurdles that faced the Committee included difficulty in persuading illiterate nationals and fatalistic fundamentalist Muslims to understand the need for contraception and VCCT services and agree to use them. In the quest to set a humane HIV/AIDS policy for native and expatriate workers, Qatar did not abide by WHO recommendations, continuing to screen immigrant workers for HIV infection and refusing entry to PLHIV.

• In Egypt

Lohiniva et al. (2015) record the findings of a qualitative study with community members in the Great Cairo area regarding the associated stigma of doctors treating PLHIV. The study results will be useful for informing the MOH of recommendations for techniques to reduce the public's fear of the presence and spread of what Lohiniva and colleagues describe as 'HIV referral hospitals' and to boost society's acceptance of these new hospitals. Lohiniva et al. (2015) also discuss stigmatising practices by doctors who treat or refuse to treat Egyptian PLHIV. Respondents said that doctors are afraid of contagion as they have not been educated about the proper ways of handling PLHIV. They said that HIV-related S&D can lead to PLHIV becoming frustrated and depressed to the extent that they commit suicide. Community members were afraid that doctors' carelessness about

infection control measures might transmit HIV to them, which pushes healthy individuals away and stops them using the facilities, as in India, according to Bharat et al. (2014). This also pushes PLHIV and their doctors away from HIV referral hospitals. Some respondents disapproved of doctors refusing to treat PLHIV, saying that not offering medical services to a PLHIV in need is ethically unacceptable under the Hippocratic Oath. Others believed that doctors who refuse to offer their medical expertise and experience to PLHIV should not be allowed to practice, as PLHIV have the same right to treatment as healthy individuals. Respondents disrespected and distrusted doctors who do not treat PLHIV (Mustaneh & Mouseli, 2013). Only one respondent justified such doctors' actions as due to their fear of contagion and concern about themselves and their families.

Lohiniva and colleagues (2015) also cite Nyblade et al. (2013), who stress that HIV-related stigma prevents PLHIV from seeking healthcare in medical institutions. Lohiniva et al. (ibid) explored the perceived stigmatisation of PLHIV among community members in a low-HIV-prevalence setting and worked with doctors associated with HIV to develop stigma-reduction policies for HIV referral hospitals. IDIs were conducted with fifteen men and fifteen women with average or below-average education in the Greater Cairo area who lived next to the first HIV referral hospital in Egypt, set up as part of the National AIDS Plan. As discussed above, stigmatisation of PLHIV has deep origins in the culture, customs and traditions of Egypt's conservative religious society. Many respondents did not want to use healthcare facilities used by PLHIV. Women made more moral judgments of PLHIV than men, matching the results of studies in Vietnam and Ethiopia by Lifson et al. (2012) and Pharris et al. (2011) respectively. Lohiniva et al. (2015) cite Pulerwitz et al. (2010), who explain that the 'higher value-based stigma' among women than men in Egypt is due to the culture and traditions which dictate that women in particular must not engage in socially frowned upon and unacceptable behaviours such as illegitimate sex, which are often attributed to PLHIV. Lohiniva et al. (ibid) cite Byakika-Tusiime et al. (2009) and Turan et al. (2011), who emphasise that fear of HIV-related stigma results in PLHIV avoiding HIV testing, disclosing their seropositivity and adhering to ARVs.

According to UNESCO (2011), in 2009 the US Naval Medical Research Unit No. 3 in Cairo invited stakeholders in the HIV/AIDS response to create a national forum of representatives from various spectra to combat S&D against PLHIV called the Egyptian Anti-Stigma Forum. It is funded by the Ford Foundation as part of the project Promoting HIV/AIDS Human Rights and Challenging Stigma and Discrimination in Egypt, an umbrella under which several CSOs and FBOs cooperate to fight S&D. The required

interventions necessitate a multi-disciplinary human-rights-based approach involving influential people living with HIV/AIDS for a better outcome. Evaluation of the involvement of PLHIV at the social policy and practice level is still to be researched. A consensual stigma index has never been established. A trial to establish such an index was carried out via a study in 2011 and released as unpublished data in 2013, based on the Universal PLHIV Stigma Index Methodology, and worked with PLHIV investigating stigmatisation in the previous twelve months. Several PLHIV reported overlapping risk behaviour. The results showed that the majority of PLHIV had not disclosed their HIV seropositivity, with more men disclosing than women; that the majority of the women had been infected through heterosexual sex with their husbands; and that enacted stigma included expulsion from religious activities. Family insults and physical threats were directed especially against women in the family, while men complained of assault outside the family. The reasons for S&D were fear of contagion, not understanding the transmission routes, the shame of infection, conflict with religious and moral norms, and job loss. Felt stigma among PLHIV subcategories was examined and found to be based on self-blame, guilt and shame. Many PLHIV reported being detained, isolated, quarantined and even threatened when they tried to claim their rights by pressing charges against offenders. They did not trust healthcare facilities to guard their privacy or anonymity: many complained bitterly that a healthcare professional had reported their HIV seropositivity to their spouse without their consent and before they themselves knew their results (Egyptian Society for Population Studies and Reproductive Health online, 2013).

In Egypt, scientists such as Shawky et al. (2009) emphasise that S&D and prejudice act on three different strata: the internalised stigma that PLHIV or those with risk behaviours feel, which makes them shy away, hide their identity, withdraw socially and refrain from seeking diagnosis, treatment, healthcare or social help; healthcare providers' fear of contagion with HIV and of losing clients if it becomes known that their facilities help PLHIV, to the extent that they may refrain from providing medical assistance to such groups in time of need; and politicians' of many Arab countries denial of the existence of HIV/AIDS within their borders, leading to lack of vigilance and awareness of possible PLHIV.

UNDP's HARPAS (2009) reports on its efforts to abolish stigma via a religious initiative. HARPAS held conferences in Cairo in 2004 and Tripoli in 2006 which produced the Cairo Declaration (2004) and the Tripoli Declaration (2006). These encourage prominent

Islam and Christian religious leaders in the Arab world to issue religious rulings stressing their religions' merciful attitude towards sick people, most importantly PLHIV. The religious leaders, noticing that many innocent people were not seeking diagnosis or treatment due to shame and fear of stigmatisation, changed their attitudes and urged believers to support PLHIV. HARPAS tackles cultural and religious traditions that increase the population's vulnerability to HIV, and promotes true religious spirit, calling for mercy and justice through the re-evaluation of religious views about human rights, especially women's rights. Muslim and Christian religious leaders are committed to educating their followers about combatting HIV/AIDS using toolkits designed for their use (HARPAS, 2009).

3.4.3.3. Challenges to HIV-stigma-reducing efforts

Dai et al. (2013) claim that there is scarcity of research on interventions specifically targeting reducing the intersecting stigmas that highly-vulnerable groups frequently face. These interventions are important for enabling MARPs' greater involvement in biomedical prevention efforts such as universal VCCT services, ARV treatment and chemoprophylaxis.

With the well-known problem of MARPs' non-adherence to treatment, such research literature is needed for an appropriate national response to HIV/AIDS (Marazzo et al., 2013). Khumalo-Sakutukwa et al. (2008) find limited evidence of the effect of interventions on important behavioural and biomedical arenas such as ARV uptake and retention, which are necessary for the prevention of vertical transmission.

Another gap to address is the absence of tested interventions in support of PLHIV's human rights. Several countries have issued new laws or improved and expanded existing laws to protect PLHIV against discrimination (UNAIDS, 2010). For PLHIV to be able to access their rights, first they must be made aware of the laws that grant these, and second, they must be empowered to complain and fight for their rights if they are violated. Hence legal education and legal aid services for PLHIV are necessary, as recommended by UNAIDS (2005, 2006).

Nyblade et al. (2009) cite Piot's (2006) explanation that three different challenges prevent HIV-related S&D from getting the attention it deserves in healthcare settings: there is little knowledge among healthcare personnel of the association between HIV-related S&D and its public health consequences, such as the quality of the care provided to PLHIV and the capacity of the healthcare team. HIV-related S&D on the part of

healthcare workers prevent them from supervising proper care for PLHIV and their adherence to ARVs and from caring for their well-being as a whole; and stigmatisation prevents PLHIV and seropositive healthcare workers seeking healthcare. This all has a sabotaging effect on the health of PLHIV.

The measurement of stigma is challenging. The lack of standardised outcome measures for S&D limits the use of the techniques that would be most appropriate for tackling stigma domains. Some validated scales have been created to measure specific types of stigma, populations and contexts (Genberg et al., 2008; Visser et al., 2008; Zelaya et al., 2008; Earnshaw & Chaudoir, 2009; Kalichman et al., 2009), but few valid scales measure stigma in different populations or contexts (e.g. across the MENA region), as Berger, Ferrans and Lashley (2001) and Uys et al. (2009) explain. Some aspects of stigma are culturally specific, yet crucial underlying bases are common across different contexts (Ogden & Nyblade, 2005; Nyblade, 2006). This makes the creation of standardised measurement tools easy. Such measurement of S&D is applied to the general population among family and peers, PLHIV and MARPs, and healthcare personnel (Ogden & Nyblade, 2005; Nyblade, 2006; Stangl & Brady, 2012), and the standardised survey for use in healthcare institutions developed by Nyblade et al. (2003) is a promising initiative.

It is difficult to tackle manifestations of the stigma attached to HIV at the individual level (Nachega et al., 2004; Abdool Karim et al., 2008). Interventions that fail to tackle these manifestations can lead to unsteady health-seeking behaviour by PLHIV or preventive measures, which are the pivotal goals of stigma-reducing efforts.

3.5. Summary of the literature review

This literature review has shown that in the past, religion and other aspects of Egyptian culture were associated with the country's low rates of unsafe sex, substance use and BBV (HCV, HBV and HIV) and STI infection. In recent years, and especially at the time of my research, unsafe sex, unsafe substance use and BBV/STI infection rates have been increasing, and deep-rooted conservative religious influences, gender roles, S&D are undermining efforts to prevent future infection. This survey of the literature has helped to develop a theoretical framework, which I formulated (see Figure 3.1).

HCV, HBV and HIV involve more or less the same behavioural risk and social factors. The risk factors are mainly unsafe sex (whether in heterosexual or same-sex relationship) and unsafe drug use, especially via IV injection. The social factors include women and young people's greater vulnerability to BBV/STI infection. S&D, religion and gender

roles have a huge influence and are undermining efforts to prevent the spread of BBVs/STIs. These factors are embedded in the underlying cultural patterns in this specific society, leading to insufficient and ineffective sex education in homes and schools and in the media.

Islam and the areas of the world in which it plays a dominant role in public life are characterised by a fatalistic attitude to control or loss of control in situations such as substance use and HIV infection. There is little literature about risk behaviour and the social influences on such behaviour, i.e. unsafe sex and unsafe drug injection, among MARPs, i.e. IVDUs, MSM and FCSWs, in Egypt; however, the literature on the social contexts of risk behaviour in Egypt shows how religion and gender interact to create stigmatisation of exactly this kind of behaviour.

4. Methods

This chapter discusses the research methods used in this study. A quantitative questionnaire survey and three qualitative studies were employed in a mixed-method approach. The validity and reliability of the methods, ethics considered while conducting the research and the research timeframe are all discussed.

4.1. Studies

Four studies were conducted among Egyptian substance users and concerned policymakers in Egypt. First, a quantitative survey was carried out in 2008 via a questionnaire to collect information about substance users' knowledge, attitudes and practices regarding drug use, sexual behaviour, including the risk of BBVs/STIs and sex education. Statistical associations between the participants' characteristics and their KAP were investigated; however, this survey could not provide deeper insight into substance users' thinking and ideas.

This was addressed by a separate qualitative study of the same population of substance users and concerned policymakers in 2010. It was preceded by a pilot study in 2009 to get a preliminary sense of the data that would arise in the main qualitative studies regarding the substance users' perceptions of the best prevention strategies, given the nature of Egyptian culture, which is religious, conservative and highly stigmatising with regard to drugs and sex.

The two qualitative studies carried out in 2010 included focus group discussions with substance users within the Freedom Drugs and HIV Programme in Egypt, where the pilot study was conducted with different participants. The questions and topics discussed in the FGDs overlapped those in the KAP survey. The qualitative studies also included IDIs with key policymakers associated with drug rehabilitation and BBV/STI prevention in Egypt. These IDIs were expected to provide valuable insights from the administrative perspective.

This mixed method research gathered both qualitative and quantitative information. While the quantitative methods identified statistical associations between the participants' characteristics and their KAP, it did not sufficiently deepen understanding of their ideas, behaviour, culture and interactions. The qualitative methods should support the quantitative research by contextualising the quantitative results. However, it was essential to respect the differences between the qualitative and quantitative elements. As

Gomm and Davies (2000) explain, both approaches emphasise the importance of making the research credible and accountable to the reader through a detailed presentation of the ways in which the results were obtained. This mixed methodology provided an opportunity for informal triangulation of the information for a greater degree of assurance that correct and valid results would be obtained.

Significant gains in understanding and reducing the risk of BBVs/STIs among the substance users were achieved through the quantitative survey. However, it was necessary to correlate individual-level characteristics with a fuller understanding of the impact of the social context on this risk and to understand why people did what they did from their own perspective, by means of the qualitative studies. In this study the quantitative and the qualitative results complement each other. The KAP results quantify the risks and are more generalisable to the Freedom Programme clients, while the qualitative results deepen understanding of their ideas and impressions. There is no contradiction between the quantitative and qualitative findings.

Informal triangulation compared the KAP survey data with the qualitative data. I refer to this across the upcoming Methods, Quantitative and Qualitative Analysis and Discussion sections. Below I discuss the methods used for the quantitative and qualitative designs in detail.

The mixed-method approach that I used is supported by several studies. Bryman (2011) confirms that ‘both the quantitative and qualitative methods, when used together, should allow themes to emerge, hence adding to the validity and reliability’. As Dunning et al. (2008) argue, mixed-method research is a relatively recent research method that combines the best of qualitative and quantitative research. It is practical and logical in combining both quantitative and qualitative research in a manner that serves the research question well. This mixture should therefore have complementary strengths and not overlapping weaknesses.

Bamberger (2000) mentions that qualitative findings can often be extracted from quantitative methods. The two approaches reciprocally support each other. At the same time they may produce discrepant outcomes. An FGD might explore why people view the same ideas in a different fashion and allow space for the researcher’s influence, whereas quantitative researchers cannot impose their personal ideas or opinions on either the participants or the research. Denzin (1978), too, believes that the mixed-methods approach offers more reliable explanation through triangulation.

4.1.1. Questionnaire surveying substance users' knowledge, attitudes and practices regarding the risks of blood-borne viruses and sexually-transmitted infections

4.1.1.1. Design and study population criteria

- **Inclusion criteria**

The study population for this cross-sectional survey consisted of young substance users receiving rehabilitation at the Freedom Programme, rehabilitation graduates working at the Freedom Programme and other active substance users on the streets who had been identified by the rehabilitation graduates working as the Programme's outreach peers. This population included Muslims and Christians, males and females, and a wide diversity of ages, levels of education, substance-use patterns (age at onset, duration of substance use, nature of substance used and administration method), socioeconomic classes, sexual orientations, sex education awareness, criminal records, levels of rehabilitation and religious beliefs.

Dr El Kharrat played a strong facilitatory role in the invitation of participants, securing optimum conditions for the research and asking Freedom Programme staff to cooperate. The sector directors, centre managers and supervisors were supportive in carrying out his orders, creating appropriate circumstances for the study, gathering the resident rehabilitating substance users, keeping discipline and dispensing reassurance to participants who had reached a reasonable phase in their quest for recovery at which they could understand and answer the survey. The Freedom Programme clients include all subgroups of MARPs with a high vulnerability to BBVs/STIs.

- **Exclusion criteria**

Those with a court sentence who were going to jail were excluded, as were substance users who could not be interviewed due to a serious medical condition or hospitalisation, and those under 16 years of age, who are categorised as child substance users. The first two groups were excluded in the anticipation that they would not be able to answer the questionnaire with full concentration and free disclosure or guarantee that they would be present on the day of the survey, substance-free and fully conscious. Child substance use was not my domain of study.

4.1.1.2. The study population

The study population comprised three main subgroups of substance users in different stages of use or rehabilitation, which are presented below.

- **Rehabilitating resident clients**

These were newly-arrived residents at the Freedom Programme facilities. They had heard about the programme via different channels, most effectively through word of mouth from an outreach peer. In the rehabilitation centre residents follow a strict and balanced schedule of waking and sleeping hours, eating, meditating, socialising and smoking, while engaging with the internationally-respected NA 12-Step substance abuse recovery programme, and more importantly, group therapies of various dynamics. This allows them to dissociate from their old environment for a period of five or six months and learn to invest in their strong points and work on their weaknesses in order to courageously face and deal with their substance use. In the first two weeks they are not allowed to make or receive phone calls, leave the facilities or receive visitors. After two weeks they can make calls and receive visitors. Gradually a rehabilitating residing client is allowed to make visits to his home, first escorted by his rehabilitation graduate supervisor and later, when he has earned considerable trust, on his own. Unlike many other rehabilitation programmes the Freedom Programme is not compulsory, and clients are free to leave any time they choose. 'Relapsing clients' are defined as those who return to the facilities to work with the relapse rehabilitation programme for three months, followed by a month of follow-up at home. The rehabilitating substance users represented most of the study population in my study.

- **Rehabilitation graduate staff**

The rehabilitation graduates were members of staff who had completed their recovery through one of the sub-programmes of the Freedom Programme. The NA 12-Step substance abuse recovery programme usually takes a year to eighteen months to complete, during which time a rehabilitating substance user is expected to work on the first to the fourth step under supervision while resident at the centre, and then to continue attending NA and/or AA meetings closely supervised by another rehabilitation graduate with a longer established recovery record to help him or her through the programme. After their graduation ceremony and receiving their certificates, rehabilitation graduates usually start by volunteering to be supervisors of current rehabilitating substance users and then rise up the programme's hierarchy to become supervisors, centre managers, sector directors, programme managers, heads of outreach teams, consultants and advisors to the programme. To become a certified substance use therapist they attend several training courses, complete a certain numbers of study hours and take several exams to attain an internationally-accredited diploma.

- **Active substance users recruited via the outreach programme**

Active and relapsing substance users were recruited by the outreach sector teams in Cairo. These represented the smallest proportion of my study participants. They often included MARPs of various subcategories, who differed from other substance users in that they avoided seeking outside help because of the high S&D they received from their family and society. It was a privilege recruiting substance users who were normally so hard to reach due to their lifestyle. Most were on the streets, most had criminal records, some were trading drugs in a minor way and some were involved in commercial or transactional sex for drugs, food, money, shelter or protection. Having been identified through the snowballing technique via peers already working at the Freedom Programme, they met weekly at programme support group meetings.

4.1.1.3. Sampling and recruitment of study participants and research facilitators

All potential participants were invited to take part voluntarily, and many refrained. The total number of substance users approached for the survey in 2008 was 500, of whom 410 consented to take part; 203 of these were intravenous substance users (see Table 5.1, which summarises and compares the samples in each study).

Before conducting the survey 48 volunteers consented to test-run my questionnaire. After this pilot survey I improved my technique in two ways before conducting the actual questionnaire. Firstly, I offered the substance users refreshments during the survey and allowed them to smoke cigarettes to help them to concentrate. Secondly, although it was a self-completed questionnaire (except for illiterate respondents, who were interviewed one-to-one by a literate supervisor), I was present in the room with my research facilitator(s) and the substance users' supervisors to maintain discipline, explain or rephrase difficult questions, assist impatient resident rehabilitating clients with completing the questionnaire, and allow respondents to withdraw and retract their signature from the consent form.

Forty-two substance users were excluded for various reasons including aggressive behaviour, very recent arrival at the rehabilitation centre having not spent adequate time in rehabilitation, recent discovery of HIV seropositivity which found the user still in shock or rage, going for hospitalisation, going to prison, readmission to the detoxification centre, or the dual diagnosis of a mental disease such as major depression together with substance use.

- **Recruitment of rehabilitating resident substance users**

Facilitated by Dr El Kharrat, managers at the centres in downtown Cairo and its suburbs, Alexandria and Wadi El Natrun, Western Desert, were notified of my visits with my research facilitators. Specific times and dates were allotted for the centre visits. Recruits were informed and were seated in a group together with their supervisors. Unfit clients, such as those who were violent, extra-shy or paranoid, were excluded. I introduced myself and the research facilitator(s) and distributed forms introducing my study, requesting the participants' voluntary consent and assuring them of confidentiality and anonymity. The recruits read these carefully, asked questions and then decided whether they would like to participate. In cases of assent they wrote their name and the date and signed in the presence of their supervisors. The non-consenting substance users (clients and graduates) left and the rest received the questionnaire to read and complete. I usually sat in the middle of the group helping participants with their queries. I collected the questionnaires and forms afterwards, thanked the participants for their time and effort, and offered them refreshments.

- **Recruitment of rehabilitation graduates (staff)**

Most of the resident client supervisors also filled out the questionnaire to set an example to any suspicious substance users, maintain discipline in the room and keep an eye on all that went on during the session. Some sector directors, centre managers, outreach heads or heads of sub-programmes were also eager to fill out the questionnaire. Their input was very enriching, as most had previously passed through experiences of substance use, rehabilitation and even relapse. They had also completed the NA 12-Step substance abuse recovery programme, which had been a transforming experience in itself.

- **Recruitment of active substance users via the outreach programme**

These substance users included IVDUs, MSM and FCSWs. These subgroups usually overlap. They were accessed through rehabilitation graduate peers working for the Freedom Programme, who met them on the streets in drug-taking and -dealing locations, bringing them messages about quitting and protecting themselves from infection with BBVs/STIs. They later invited them to the outreach sector office, where they could fill out a questionnaire, take a shower, have a hot meal and get new clothes if they needed them. They were invited to consent to HIV and HCV testing, given condoms and clean syringes (if needed) and information about safe sex and safe injection, and invited to attend the programme's weekly support group meetings and all relevant activities and to join the programme's outreach sector network. MARPs were asked to show up

periodically (otherwise they were re-contacted) on pre-set specific dates to fill in a questionnaire to keep track of changes in their behaviour after using the outreach sector's services, e.g. VCCT, harm reduction, sex education, and legal assistance if needed, particularly for MSM and PLHIV. The snowballing technique is used to collect more participants and is largely used with compromised and stigmatised groups. Since many substance users, and especially MARPs, were too shy to step forward and had strong defence mechanisms and inhibitions, I asked the outreach peers to help me to recruit about ten participants in the subcategories of MSM, FCSWs or PLHIV. They in turn asked the substance-user MARPs involved with the Freedom Programme, who came to help and themselves invited colleagues who had not got involved with the programme (a very small number), and so on. Both the peer snowballers and those who had been recruited via the outreach programme were rewarded for helping to recruit further participants and for their time and effort.

The term 'snowball sampling' is elaborated upon in the following studies: Markopoulou (2011) asserts that the sample group grows like a rolling snowball, and as it gets bigger more data is generated. She mentions that this technique is most often resorted to when dealing with hidden populations that are hard for researchers to reach, such as MSM and FCSWs.

Heckathorn (1997, 2002) contends that since the participants are not selected from a sampling frame, people more likely to recruit their friends, creating a possible bias. Heckathorn believes that it is impossible to make unbiased estimates using snowball samples. However, in my research, although the substance users did sometimes recruit their friends they were of a homogenous group sharing more or the less same experiences. So I may say the bias decreased to a significant level. Goodman (1961) straightforwardly describes snowballing as a non-probability sampling method, where study participants recruit other participants through their connections and networks.

- **Recruitment of research facilitators**

A female Christian in her mid-20s with experience in outreach and counselling and an outgoing, pleasant and tolerant personality had been working for years with the most underserved, compromised people. She went to the church that I attended and had worked for a while as my research assistant. She was interested in my field of study. The services of a female volunteer were essential, especially when dealing with female substance users and FCSWs, visiting them at their centre and tackling sensitive issues.

A male Muslim final-year medical student in his early 20s with a strong social and public health background had been the focal point for the MENA Global Youth Coalition for AIDS for many years as an HIV/AIDS youth activist with strong connections with youth organisations and UN agencies. I had met him while he was doing his internship in the UNDP-HARPAS programme I was working at before starting my PhD studies in the UK. As my female research facilitator and I are both Christian it was important to have a Muslim male to balance the team, as in Egypt's religious society this is a big issue and we could otherwise have been misunderstood, jeopardising my research.

4.1.1.5. Data collection

Data collection took place at the Freedom Programme's facilities in Cairo, Alexandria and Wadi El Natrun in the Western Desert. The data was collected through a self-completed structured questionnaire. On the rare occasions when a participant substance user had poor vision or a low IQ, was illiterate or wished for assistance with the questionnaire, the staff rehabilitation graduates or I administered it to them.

Bowling and Hammond (2008) mention that the main advantage of using this sort of structured questionnaire is the fact that the respondents and researcher share the same meanings for the words and phrases used.

- **Design of the questionnaire and formulation of the questions**

The questionnaire was based upon the FHI 360 questionnaire used by the Freedom Programme in 2006 for the first phase of the Egyptian MOH's Biological and Behavioural Surveillance Survey (BBSS) project investigating STIs and HIV/AIDS among MARPs. It targeted FCSWs, MSM and IVDUs from several programmes. In 2007, as a volunteer gastroenterologist at the Freedom Programme, I was asked to add some questions pertinent to HCV to this questionnaire due to its high incidence and prevalence among the wider Egyptian population, most importantly among substance users and especially IVDUs. HCV is a national problem in Egypt.

This later gave me the idea of developing the questionnaire to fit my own research objectives. My supervisors at UEA, along with my external supervisor in Egypt, suggested making modifications so that the new questionnaire introduced more topics and was different to the original. The changes included rephrasing entire questions, changing the sequences of questions and sections, adding more questions to each section, removing many irrelevant, highly-specialised questions on drugs, expanding sections related to HCV and HBV and creating sections to cover KAP pertinent to sexual acts and substance

use practice. The original FHI 360 questionnaire was shorter and in colloquial Egyptian Arabic, so after I had made the changes in English and obtained my supervisors' approval I translated the modified and developed questionnaire into colloquial Arabic again, with separate male and female versions, as addressing a man or a woman differs in Arabic.

The questionnaire covered the following subjects in 14 sections:

- participants' demographic characteristics: age, gender, education, substance use pattern, socioeconomic class, marriage and sexual history;
- participant's perceptions of BBVs: HIV, HCV and HBV and STI risk, diagnosis, prevention and treatment;
- the relationship between substance use and HIV, HCV and HBV;
- sexual attitudes and practices, e.g. condom use, irregular and regular sexual partners, commercial sex and same-sex relationships;
- KAP regarding HIV, HCV and HBV and STIs;
- condom use and access to condoms;
- access to medical facilities and advice-seeking behaviour;
- partner notification in case of BBV infection
- marriage to partners infected with BBVs;
- sex education and gender issues;
- drug and alcohol use: onset, course, duration, pattern;
- intravenous drug injection practice;
- drug treatment and rehabilitation history.

I considered the following principles when modifying and formulating the new questions: they must be closed questions to avoid assumptions; simple, with one straightforward choice of answer such as 'yes' or 'no'; in neutral and unbiased language; not lengthy; free of ambiguity; and must not carry more than one meaning. I used filtering and routing questions. I began with easy ice-breaking questions such as on demographical factors to break the ice. Modified Likert scales were used to assess the strength of agreement with statements about attitudes and opinions, with the same number of positively and negatively-worded choices. Four-, five- and six-point scales were used for some items to avoid 'no opinion' and 'sitting-on-the-fence' types of answer. All the answers carried the same weight and significance in the statistical analysis. The questionnaire went through development and refinement, including the pilot as mentioned. During this process some questions were rephrased to make them easier for the respondents.

4.2. Statistical analysis

4.2.1. Score construction on knowledge, attitude and practice

Data was entered electronically using Microsoft Excel and statistically analysed using Stata version 9. Items were added to get composite scores. This gave equal weight to items with yes/no, i.e. 1/0 responses, and more weight to items with multiple outcomes, e.g. 0–6. This resulted in six separate composite knowledge, attitude and practice scores about sexual practices and drug use.

4.2.1.1. Sexual practice

- **Knowledge**

The substance users were asked to respond to 112 statements about safe sexual practice with 99 offering two-response options with 1 = Yes, 0 = No, and 13 statements with items on a 6-point modified Likert scale from 0 = Not at all to 5 = Very much. The final scores ranged from 0–164, with high scores suggesting greater knowledge of safe sex for protection from BBVs/STIs.

- **Attitude**

The respondents were asked to respond to 95 statements about safe sex, 80 with two-response options, 1 = Yes, 0 = No, 14 rated on a 6-point modified Likert rating scale from 0 = Not at all to 5 = Very much, and one rated on a 4-point rating scale from 0 = Nil to 3 = Severely. The final scores ranged from 0–153, with high scores suggesting a lower-risk attitude to BBV/STI infection in sexual practice.

- **Practice**

The participants were asked to respond to 20 statements about safe sexual acts, with 17 offering two response options. 1 = Yes, 0 = No, and three with a 4-point rating scale from 0 = None to 3 = Each time. The final scores ranged from 0–26, with high scores suggesting less risky sexual practices and hence more protection from BBV/STI infection.

4.2.1.2. Intravenous drug use

- **Knowledge**

The participants were asked to respond to 84 statements about safe intravenous injection, 71 with two response options. 1 = Yes, 0 = No, and 13 with a 6-point modified Likert scale from 0 = Not at all to 5 = Very much. The final scores ranged from 0–136, with high

scores suggesting greater knowledge about safe intravenous injection and less risk of contracting BBVs/STIs.

- **Attitude**

The respondents were asked to respond to 61 statements about safe injection, with 47 offering the two-response options. 1 = Yes, 0 = No, and 14 offering a 6-point modified Likert rating scale from 0 = Not at all to 5 = Very much. The final scores ranged from 0–117, with high scores suggesting a more positive attitude towards avoiding BBV/STI infection through safe injection.

- **Practice**

The substance users were asked to respond to 25 statements about safe intravenous drug use, with 17 offering two-response options, 1 = Yes, 0 = No, 7 more-component statements rated on a 4- or 5-point scale from 0 = None/never to 3 or 4 = Always/every time, and 1 with a 9-point rating scale from 0 = None to 8 = Four or more times a day. Final scores ranged from 0–47, with high scores suggesting more positive protection from BBV/STI infection.

4.2.2. Statistical tests used, depending on the format of each variable

4.2.2.1. Descriptive statistics

Arithmetic mean and standard deviation (SD) were used for normally distributed continuous variables;

Median and interquartile range (IQR) were used for non-normally distributed continuous variables;

Proportions were used for categorical variables. Prevalence rates were estimated together with 95% confidence intervals (CI).

4.2.2.2. Analytical statistics

The responses of different groups of respondents to the individual questionnaire items and the six KAP scores were compared as follows:

- male vs. female;
- younger vs. older;
- IVDUs vs. non-IVDUs;
- university education and above vs. below university education.

These comparisons used the following statistical tests:

- **Continuous variables**

Student-t test: for two groups and normally distributed data;

Mann-Whitney (Rank sum): for two groups and non-normally distributed data.

- **Categorical variables**

Chi square if cell >5;

Exact test if cell <5.

- **Correlation**

Spearman test.

Multivariable logistic regression (for binary variables), ordinal logistic regression (for ordered categorical variables), and linear regression (for continuous variables) were used to control confounding variables while examining several explanatory variables at the same time. Individual KAP items were modelled as binary outcomes, with age, sex, IVDU and level of education as potential explanatory variables.

Statistical significance was defined as $p < 0.05$.

4.3. Pilot qualitative study of rehabilitation graduates

My explorative pilot study is supported by Johnson and Christensen's (2007) explanation that qualitative research is used primarily for exploration purposes and to understand how people think and act, based on the data examined as a whole during analysis for patterns and themes, and with a focus on subjective personal issues rather than generalisations.

4.3.1. Aim

The pilot study was conducted for training purposes to see what types of impression and meaning might be obtained from the prospective qualitative studies and to modify the discussion guide and technique accordingly.

4.3.2. Objective

Although the three interviewees were experts and policymakers they were also all rehabilitation graduates. The objective of the pilot study was to elicit their beliefs about active and rehabilitating substance users, i.e. to elicit general rather than personal responses.

4.3.3. Sampling of pilot study participants and research facilitator

4.3.3.1. Recruited rehabilitation-graduate participants

The sample comprised three males: two Muslims in their 30s and a Christian male of 61 with a very long duration of staying sober from drugs. All were married heterosexuals. One Muslim male came from an above-average socioeconomic and educational class, while the other came from a below-average socioeconomic and educational class. The Christian male was from an average socioeconomic but below-average educational class (see Table 5.1, which summarises and compares the samples in each study).

The Christian interviewee was the Freedom Programme consultant who was seen as the godfather of all substance users in Egypt due to his long period in recovery. He was at the very top of the hierarchy of this pioneer rehabilitation programme and was a decision-maker. One of the Muslim rehabilitation graduates was a deputy director of the programme's outreach sector and had a long period of recovery behind him; the other was a supervisor of a men's rehabilitation centre, with a shorter duration of recovery. He was preparing to be a professional substance-use therapist.

4.3.3.2. Type of sampling, duration and location

The type of sampling was purposive.

Two interviews lasted around 45 minutes and the other lasted 60 minutes. All were held at the Freedom Programme's headquarters in downtown Cairo, with the help of the male facilitator who had facilitated the 2008 KAP survey.

4.3.4. Methods

I conducted semi-structured IDIs to deeply explore the participants' experiences, thoughts, challenges, beliefs, substance use history, recovery and perceptions of the most appropriate strategies possible to protect Egyptian substance users from BBVs/STIs. The interviewees were able to direct the conversation into more intimate details freely, and this talking and listening activity let them take the conversation into related issues at times, giving me a greater understanding of the concepts but remaining within my planned interview framework.

The semi-structured IDI method that I used is supported by several studies; Patton (1990) mentions informal and semi-structured types of qualitative interviewing. Informal conversational interviews and semi-structured open-ended interviews involve a flexible

manner and a discussion guide. However, the researcher does not know all the questions and answers in advance, and participants may talk freely about their topics of interest, sometimes leading the conversation away from its main track. In the structured interviews used for quantitative research all the questions are worded precisely beforehand and are asked in the same fashion every time. Guba (1978) states that qualitative researchers have fewer firm guidelines as to when to stop collecting data, possibly leading to overextension, exhaustion of resources, repetition and drifting from the purpose of the research.

4.3.4.1. My role as interviewer

I adhered to good practice and assured my interviewees of confidentiality and anonymity. I introduced myself and my research facilitator properly and then gave the participants an introductory form explaining the purpose of the study in detail including contact details for my supervisors in the UK and Egypt, and an informed consent form confirming their voluntary participation and approving audio-recording for them to sign in front of a witness after reading it carefully.. I assured them that only my supervisors in the UK and Dr El Kharrat might listen to the interviews, and that no one would see the contents of the transcription apart from the research facilitator and me.

My role as an interviewer is supported by several studies. In IDIs, according to Denscombe (1999), the researcher should actively listen, encouraging the interviewee to talk and disclose, keeping quiet and not interrupting unless necessary. However, the researcher's influence on the data production should not be disregarded, as he or she is a co-participant in the IDI. I tried as much as possible not to affect the flow of the conversation and sometimes let it drift to relevant topics that were not in my discussion guide, as long as they served the purpose of my research.

According to Duggleby (2005), an FGD moderator is crucial to facilitate open interaction among FGD participants. While some participants need an unbiased neutral moderator, others prefer a moderator acknowledged to have an influence on the FGD. A moderator outlines certain expected responses from the respondents beforehand by setting relevant themes to explore in the FGD, as Hydén and Bülow (2003) mention. Crossley (2002:1479) also suggests that 'a moderator might at times try to trigger a strong reaction, intentionally', as I did myself on rare occasions.

Smithson (2000) discusses another factor that influences the narratives emerging from the respondents: how the moderator influences the FGD in the case of its domination by

one or more participants. Sometimes participants may hijack the FGD, challenging each other and bringing up issues that they believe to be relevant. In the process they prevent others from sharing thoroughly, and hence it is crucial to comprehend the types of implicit and explicit exchanges between participants during the discussion. Smithson (2000:112) argues that the FGD is ‘collectively powerful in that it has access to shared knowledge of which the moderator is ignorant’.

4.3.4.2. Discussion guide

The discussion guide that I developed covered the topics listed below. The intent was to devise questions that would reveal the most information possible in order to help me to develop effective techniques tailored to protect Egyptian substance users from BBVs/STIs.

- **Some themes derived from the KAP survey**

- participants’ knowledge of BBVs/STIs, e.g. their perception of the risk of HIV and the relationship between substance use and HIV, HCV and HBV;
- participants’ personal history of substance use: precipitating factors, onset, course, duration and patterns, recovery and maintenance;
- notification of partner if a substance user or if her or his non-substance-using partner proves HIV, HCV or HBV seropositive;
- substance users’ perspectives of marriage to another substance user who may be HIV, HCV or HBV seropositive.

- **Other themes not derived from the survey**

- history of imprisonment;
- perspectives on God’s role and fatalism regarding substance users, both during substance use and when infected by BBVs/STIs;
- substance users’ experiences of S&D from family and society, especially when infected with BBVs/STIs;
- available VCCT and harm-reduction techniques for BBVs/STIs;
- barriers to accessing VCCT and harm-reduction services;
- available appropriate sex education in Egypt;
- barriers to appropriate sex education in Egypt;
- best methods of preventing BBVs/STIs among substance users.

Several pertinent authors describe the discussion guide. Bowling (1998) lists several other synonyms for this, e.g. the ‘theme list’, the ‘interview schedule’, the ‘topic guide’ and the

‘inventory’ of important topics, which is preferably kept to one page. The guide ensures that all the topics will be discussed, and since it is flexible and can contain arising topics of interest the interviewer can focus on the ongoing interaction. I too kept the entire discussion guide on one page for easy focus. Lofland and Lofland (1984) describe the interview guide or schedule as a list of questions or general topics that the moderator wants to explore during each FGD or IDI.

- **Wording of questions**

I followed Bowling’s (1998) recommendations for interviewing as follows: open-ended questions allow the interviewee to discuss the subject comfortably, and rephrasing is useful for the clarification of any questions which may need further explanation. Closed questions disrupt the flow of the conversation; long questions were also avoided so as not to lose track of the flow. Two-in-one or loaded questions might confuse the interviewee, and biased and leading questions should be avoided to allow maximum objectivity and neutrality. I rephrased a few questions at times, but all the interviewees were intellectuals and the discussions were enriching.

- **Probing**

I probed many times for deeper information about a meaning, idea or impression. However, I tried not to embarrass any participant by making her or him uncomfortable discussing a topic or revealing more than she or he was ready to share.

Denscombe (1999) defines probing as asking a follow-up question to elicit information, seek clarification, fill the gaps in the participant’s response and elicit more detail. Five types of probing can be used, according to the situation: seeking elaboration by asking for more detail; continuation, encouraging the interviewee to keep speaking; clarification, to resolve any confusion about meanings; paying more attention to what the interviewee is saying; and completion, encouraging the interviewee to finish a particular line of thought or idea.

4.3.4.3. Data recording and storage

- **Handwritten notes**

Field researchers rely heavily on field notes, which are running descriptions of everything related to the FGD and indeed to the IDI; e.g. the setting, the people, the activities and the sounds. My field notes, including a diagram of the layout of the setting, were recorded by hand; we mapped where each participant was sitting in the room, with the research facilitators numbering the order of the mapped substance users’ spoken contributions.

This was important for the transcription, translation and analysis. I also documented my observations and some quotes from participants. I managed to keep a reflexive log with a running description of the session and did not have to resort to shorthand much.

The hand-writing of data-collecting field notes is supported by Lofland and Lofland (1984), who explain that there should be plenty of notes keeping track of what, when, why, who, etc., as they might prove significant later. The authors recommend taking different notes on different issues, e.g. the researcher's observations and reflections as a human tool for data collection and his or her observations, feelings, reactions, insights and interpretations are all worth documenting and should all be written down in a reflexive log or diar, writing on alternate lines to allow for the addition of extra details. Drawings and maps can be included.

- **Voice recordings**

The interviews and FGDs, which were in colloquial Egyptian Arabic, were recorded. The tape recorder was checked and every FGD and IDI was given a code. The tape recorder was kept running all the time, and turned off only after the conversation ended. The male participants forgot the presence of the female research facilitator and went on comfortably discussing their experiences and interacting.

Flick (2009) states that recording machines render data documentation independent of the interviewer's and respondents' roles, especially when the respondents act naturally and totally forget the voice recorder and conversation flows smoothly. According to Patton (1990:348), 'recordings have the advantage of capturing the data more faithfully than hurriedly written notes might, and could make it easier for the researcher to focus on the interview'. Voice recordings provide a good way of exploring the participants' experiences and interactions in depth.

4.3.4.4. Transcription and translation

We identified the interviewees by symbols rather than their names to preserve their anonymity. With the help of the research facilitator I did the transcribing immediately after each interview, as suggested by Gillham (2000). I translated the three pilot IDIs from colloquial Arabic to English alone.

Brown (1996) discusses the methodological difficulty of organising raw data, which may involve hundreds of pages of transcripts and field notes. These can be handled physically, sorting and storing slips of paper, or using a computer programme.

I used the services of a professional bilingual editor to translate two of the IDIs back into Arabic. This was important to check whether any of the meaning had been dropped or altered in translation, and to double-check the accuracy of the translation.

Translation, back-translation and their difficulties are discussed by several authors. Ham and Greenway (2003) emphasise that translation from Arabic to English by non-Arabic speakers is rather difficult; some Arabic words have complex meanings and incorrect translation can result. Bryman (2001) sheds light on the crucial role of language in social research and points out that translation has an influence on the data's validity. Firth (1984) stresses the fact that a professional translator/interpreter should review the researcher's translation from any other language into English to ensure its accuracy.

4.3.5. Analysis

I extracted themes to allow the interpretation of the data, remaining in constant contact with my external supervisor in Cairo to ensure their validity. I identified the following themes for each respondent:

- substance use: onset, course and duration
- history of imprisonment;
- experience of stigmatisation;
- recovery;
- role of rehabilitation graduates in society after recovery;
- obstacles hindering recovery;
- marriage;
- notification of partner of HIV seropositivity;
- harm reduction;
- best methods of BBV/STI prevention for my sample.

I used qualitative data analysis because, as Patton (1990) argues, creativity is needed to change the raw data into logical data that makes sense. Bogdan and Biklen (1982:145) define qualitative analysis as 'working with the data, organising it, breaking it into manageable units, synthesising it, searching for patterns, discovering what was important, what was to be learned and deciding what to tell the others'.

4.3.5.1. Extracted themes/impressions

Only one of the several types of qualitative analysis was used: thematic analysis (TA). I designed a framework by which I developed initial, focused and axial codes (see Chapter

6, section 6.1). Grbich (2007) defines 35 different types of qualitative analysis. Braun and Clarke (2006:82) describe a theme as ‘capturing something important about the data in relation to the research question’. A choice then is made as to whether the analysis is to be top-down or bottom-up or will use themes identified at a semantic or a latent level. An advantage of the flexibility of thematic analysis is that it allows the researcher to determine the themes in several ways. Here the researcher’s judgment is crucial, and he or she should revisit the data repeatedly and compare it in relation to its themes and sub-themes, continuously refining the analysis. The importance of the theme depends on whether it represents something significant in relation to the overall research question. If the researcher wants to provide a rich thematic description of his or her entire data set so that the reader can grasp a sense of the important themes, the extracted themes, codes and analyses should provide an accurate conformed reflection of the content of the data set. This is particularly true when investigating an under-researched subject such as the present research topic.

4.4. Focus group discussions with substance users

The findings of the pilot interview study influenced the way I conducted the FGDs because it helped me to understand how drug users think and act. There was no need to add or remove any item from the discussion guide; however, it helped me to ask certain questions tactfully so as not to cause embarrassment. Shaking hands before and after the interview, maintaining a smiling and non-judgmental attitude, actively listening to and thanking the interviewees sincerely for their time and for sharing such intimate details helped greatly in breaking the ice and establishing a mutual respect that facilitated the whole process. The pilot study was beneficial in that it showed me what to expect and the types of feedback (meanings, impressions and ideas) that I would be getting from the substance users’ sharing.

4.4.1. Aim

The FGDs were carried out in an effort to understand substance users’ perceptions of the risks of HIV/AIDS and their relationship with substance use, and to increase understanding regarding potentially effective BBV/STI prevention and education strategies. I aimed to assess the substance users’ views about which HIV, HCV, HBV and STI prevention measures they thought might work best according to the Middle-Eastern, predominantly Muslim and male-dominated culture of Egypt, where substance use and BBVs/STIs are taboo subjects. The FGDs allowed me to gain the maximum benefit from

the large number of key informants interacting together and with the moderator. Probing techniques were used to get the maximum response, especially as the groups were largely homogenous. My own knowledge of the matters under discussion was extremely useful.

The advantages of holding FGDs with compromised groups such as substance users are discussed in several studies. Theobald and her co-authors (2011) argue that FGDs are becoming more popular as a powerful tool for HIV/AIDS research and should be used wisely and properly. Scientists seek to understand the impressions, experiences and needs of PLHIV and their care providers, whether within the family, in society or at healthcare facilities. It is challenging to conduct FGDs with ill MARPs in low socioeconomic-class settings, where the social influence of HIV/AIDS is particularly stigmatising and prejudiced because of the what the authors call ‘eventually-poor prognosis of the disease’.

4.4.2. Objective

The objective of the FGDs was to elicit the beliefs of a small sample of substance users about themselves and others like themselves, and their experiences, and to observe their interpersonal interactions.

4.4.3. Sampling

I used purposive (non-probability) sampling, selecting the participants with an idea in mind; the sample would include key informants and exclude those who did not fit. Since I did not use random selection, the process might be susceptible to selection bias, i.e. the findings might not be generalisable to the study population.

A diversity of age, sex, level of education, substance use pattern, socioeconomic class, sexual orientation and subcategories of MARPs, e.g. MSM, FCSWs and IVDUs, and PLHIV, was taken into consideration. Males and female FGDs were held for privacy and confidentiality, as many sensitive questions would be discussed and the substance users were from more or less the same closed social circles. The conservative culture of the society particularly imposes stigmatisation on the female substance users. Male substance users stigmatised the female substance users, even though both were under the same enacted stigma. As an older physician and researcher I sensed the prospective awkwardness of the female substance users in the FGDs and accordingly made sure that a female research facilitator was present at the two FGDs with female participants.

The FGDs participants were mostly in their 20s and 30s, with a few younger or older, and included both Muslims and Christians. Differences included the level of education,

substance-use pattern, recovery duration, socioeconomic class, sexual orientation and rural/urban background. I allowed all the participants the opportunity to speak, and the discussions lasted about two hours.

Padgett (1998) and Kreuger and Casey (1994) argue that FGDs should not be so small that the diversity of perspectives is limited, and should be big enough to produce a wide spectrum of impressions.

My choice of purposive sampling is supported by several authors. As Neuman (2007) argues, the judgment of an expert is required to select individuals with a specific purpose in mind, especially in informative cases or members of a difficult-to-reach specialised population such as MARPs. Patton (1990) asserts that purposive sampling is a widespread tool in qualitative research which seeks information-rich individuals to study in depth.

4.4.3.1. Rationale for choosing these subgroups

The substance-user population and their MARPs subgroups are hard to reach due to the high societal stigmatisation and discrimination, which make them reluctant to face society and claim their basic rights such as to healthcare, education and employment. Because certain gaps exist in the literature in Egypt there is not enough serious research dealing with this population or its subgroups using a mixed-method approach to tackle all the topics, as my research does. These particular subgroups are distinct in nature; they are highly vulnerable to BBV/STI infection, are marginalised and are overlooked by both health education and healthcare. Substance users generally have poor-to-moderate knowledge about sex and risk attitudes and behaviour regarding BBV/STI infection. Concentration on this population and its subgroups adds usefulness to my study, linking gender and sexuality, BBVs and STIs with substance use and S&D.

4.4.4. Duration and location

Each FGD lasted 90-120 minutes, and they were all conducted at the Freedom Programme headquarters in the centre of Cairo.

4.4.5. Methods

The FGDs were semi-structured. I used a mixed-methods approach and informal triangulation of the FGDs, the IDIs and the KAP survey to compare qualitative and quantitative results, and observations, note-taking, my reflexive log and voice-recordings (see Chapters 4 and 5 for more detail).

4.4.5.1. Wording of questions

Open-ended questions were used to allow the conversation to flow and to gather as much data as possible. Questions that participants did not understand well were rephrased. I tried to avoid closed questions, long questions so as not to lose track of the main purpose of the session, loaded questions which might confuse the interviewees, and biased and leading questions, to allow maximum objectivity and neutrality.

4.4.5.2. Discussion guide

Although I prepared a discussion/interview guide to ensure that the same information was collected from each respondent at all the discussions and interviews, none of the responses were known beforehand. An advantage of using semi-structured FGDs and IDIs was that I was free to probe within my predetermined topics of inquiry. The discussion/interview guide helped me to organise and save the participants' time and effort as well as my own. It ensured that I covered all the issues, and when the conversation was directed away from its preset original track it helped me to return to it and stay focused.

• Themes

The discussion guide had the following themes:

- participants' perceptions of the HIV threat and knowledge of BBVs/STIs;
- relationship between substance use and HIV, HCV and HBV infection;
- history of substance use: precipitating factors, onset, course and duration, and substance use pattern;
- history of rehabilitation and relapse: precipitating factors and maintenance;
- history of imprisonment;
- perspective on God's role and fatalism: in substance use, and when infected by BBVs/STIs such as HIV, etc.;
- stigmatisation by family and society for substance use, especially if this was also associated with BBV/STI infection;
- stigmatisation among the substance users themselves, especially if BBV/STI-infected;
- partner notification if a substance or her/his non-substance user partner proved HIV, HCV or HBV seropositive;
- the kinds of marriage that the substance users believed might work best for them, i.e. to other substance users or to non-substance users;

- substance users' perspectives of marriage to substance users who might be HIV, HCV or HBV seropositive;
- available VCCT services, and barriers to accessing them;
- available harm-reduction techniques for BBVs/STIs in Egypt, and obstacles to accessing these;
- available sex education, and barriers to accessing it;
- best methods of preventing BBV/STI infection.

4.4.6. Data collection

4.4.6.1. Recruitment of substance users

Three FGDs and one mini-FGD were conducted with the following groups: MSM, male PLHIV, female IVDUs and FCSWs. I and my research facilitators observed, took notes and audio-taped the sessions, and I kept a reflexive log. The participants comprised nine IVDUs/MSM, seven IVDUs/PLHIV, five female IVDUs and three IVDUs/FCSWs (see Table 5.2 for summaries and comparisons of the samples in each study).

• Dropouts

Males: one PLHIV.

Females: Two IVDUs residing at the girls' recovery centre who were too sick to participate. Three FCSWs backed out at the last moment, suspecting that the session was a trap to arrest them or force them into detoxication and rehabilitation.

The FGDs and IDIs ended once we had responses to the questions in the discussion guide and I felt that the interviewees had finished contributing, and because their concentration decreased after 90-120 minutes.

4.4.6.2. Recruitment of research facilitators for the focus group discussions

The male research facilitator who had participated in the original KAP survey in 2008 also took part in the qualitative pilot study in 2009. He attended the two men's FGDs. Another facilitator, a female reproductive health specialist in her mid-20s with a good background in social work who was studying for a Master's degree in counselling and sexual harassment, had worked for many NGOs, most importantly the famous FBO Caritas-Egypt, and had been a guest speaker and counsellor at many youth meetings. She was introduced to me by mutual friends as a possible recruit. She attended both female

FGDs and one male discussion, as the men did not mind her presence. Her input and remarks after the sessions were enriching.

The research facilitators' résumés were approved by my supervisors at UEA and my external supervisor in Egypt. The diversity of the facilitators' gender, religion, age, background and affiliations was crucial to approaching and dealing with the wide spectrum of substance users and policymakers of both genders, and provided a variety of input.

4.4.6.3. My role as moderator

As mentioned, there has been a growing *Wahhabi* Muslim trend in Egypt toward prohibiting the handshake and even the slightest touch between men and women. The excuse is that Islam prohibits the mixing of the sexes. Luckily I did not encounter this with the female participants, as it was natural to break the ice with a handshake to add familiarity and warmth to the setting. After this I distributed the introduction forms, which described me, the research facilitators and the nature of the study, and provided the contact details of my supervisors in the UK and Egypt. I stressed the part of the informed consent form that stated that there were no right or wrong answers as the study was not a test of knowledge. I was only interested in the participants' own experiences in their own words, and in what mattered most to them. I told them that I would be learning from their experience and expertise. I made sure they understood that they were free to interrupt or stop the interview at any time and to not answer any question. I gave them time to read the forms carefully and ask questions before signing the informed consent form in front of a witness. I used easy warm-up questions and then, as the conversation went on, asked the main questions. Finally I ended with the main research question and a cooling-down period that closed with my thanking the participants for their time, effort, voluntary participation and consent to voice recording, as Rice and Ezzy (1999) and Bowling (1998) discuss.

I probed to get as much information as possible but simultaneously avoided causing embarrassment to any participant. I probed according to the situation and where needed to get a better understanding of an issue, to encourage a shy respondent by showing that I was actively listening, to bring respondents back to the main idea that I wanted to explore further, to confront them gently and to reassure them so they would be able to disclose their information comfortably and richly.

4.4.6.4. Data recording and storage

The research facilitator(s) took both notes and voice recordings while I moderated the discussions so that we would have written and taped documentation. I requested that the respondents ignore the voice recorder and act naturally. As I had anticipated, they were only aware of it at the beginning, and as the session proceeded and became more interactive they forgot about it. As I had hoped and more, the participants disclosed their views frankly, agreed and disagreed normally, even at embarrassing moments, without concern about the voice recorder or the female research facilitator.

4.4.7. Data analysis using thematic analysis

With the help and participation of my supervisor to ensure trustworthiness and credibility, the qualitative data was analysed using thematic analysis. I worked through the coding steps by looking first at the initial codes, then at focused codes and finally at axial codes.

Use of this method for analysis is supported by several pertinent authors. According to Braun and Clarke (2006:79), thematic analysis is a ‘method for identifying, analysing and reporting patterns within the data. It minimally organises and describes the data set in detail; however, frequently it interprets various aspects of the research topic’. Braun and Clarke cite Holloway and Todres (2003), who say that although qualitative methods are diverse, complex and accurate, TA should be seen as a ‘foundational method’ for qualitative analysis. It is the first qualitative analytical method that researchers should learn, as it provides the basic skills for conducting several other types of qualitative analysis. Braun and Clarke argue that TA should be considered a separate entity in itself, as it can provide rich and detailed data. It varies more than other methods of analysis such as thematic discourse analysis, thematic decomposition analysis and grounded theory in that it searches for themes across a data set rather than within a data item, e.g. an individual IDI, while the other methods require significant familiarity with their theoretical and technological details, which should be mastered before the analysis.

Murray (2003) clarifies that although narrative methods (e.g. grounded theory, discourse analysis, content analysis and grounded theory) overlap with TA, at times they contradict it. TA is not connected to any particular theoretical framework. Ryan and Bernard (2000) define thematic coding as a process performed in major analytic traditions, e.g. grounded theory, rather than a separate entity. Conversely, Boyatzis (1998) categorises TA not as an independent method but as a tool for use with other methods to analyse and report patterns (themes) within the data.

4.4.7.1. The steps of thematic analysis

We followed certain steps in the TA as supported by Braun and Clarke (2006), who list six phases/steps for conducting TA: the researcher familiarising him or herself with the data; the production of the initial codes; the search for themes; a review of the themes; the definition and naming of the themes; and finally the generation of a report. The researcher should practice accuracy throughout all the phases with meticulous transcription, and avoid the anecdotal approach.

In my research I moved back and forth between the data and the codes many times. This is a skill that develops over time and should not be rushed. As Ely et al. (1997) state, there is no single correct way to proceed in reading the literature for Ta'izz, as the analysis is not a linear process moving from one phase to the next.

The researcher familiarises him or herself with the data through the transcription and translation of the verbal data. As there are no strict guidelines on transcription, the research facilitator and I transcribed the FGDs word by word in the colloquial Egyptian Arabic used at the meetings. I compared the transcriptions with the note-taking map made by the research facilitators to get a better grasp of the sessions. I transcribed most of the FGDs myself to familiarise myself with them and get a better understanding of meanings and impressions that I might have missed during the FGD itself. I read the transcripts over and over again, checking them against the voice recordings for accuracy. I transcribed and translated all the verbal accounts and non-verbal utterances, e.g. sighs, laughs and tears, for a comprehensive picture.

This process was time-consuming and my skill at close vigilant reading and interpretation developed over time, rather than being the mere putting down of spoken words on paper. I alone then translated the Arabic transcriptions into English and sent the translations to a professional bilingual editor for checking via back-translation into Arabic to ensure that important impressions had not been lost in the translation, as Lapadat and Lindsay (1999) discuss. Then my supervisor read my raw English transcriptions of the FGDs and IDIs. Bird (2005:227) argues that transcription is 'a key phase of the data analysis within the interpretative qualitative methodology'.

• Producing the initial codes

I was keen not to leave any interesting elements out of the picture, and coded as many potential themes as possible in case they might be useful later. I started gathering interesting pieces of information as initial codes on an A3 sheet of paper, one by one in a

systematic fashion, while I was going through the whole of the data transcribed from the FGDs, as supported by Bryman (2001).

Since no data set was without contradiction, I managed to form a reasonable thematic map which eventually generated an overall conceptualisation of the data and the relationships within it. TA does not neglect contradictions or inconsistencies across the data; accordingly I kept all the participants' accounts, even those that differed from the mainstream themes.

- **Forming focused themes**

I tried to find relationships between the codes/themes as the main overarching themes, and their sub-themes presented themselves. I combined initial codes into focused codes/themes, sometimes rephrasing but rarely discarding them. My supervisor and I added these to the A3 sheet. At this point a sense of the significance of individual themes emerged, and having not left any initial code behind, the focused codes started to make sense, as Braun and Clarke (2006) argue.

- **Reviewing the thematic map**

Since coding is a continuous process, if the thematic map worked my transition to the next step, reaching the axial codes, would be smooth and successful. However, I needed to go over my map again and again, refining it and checking that all the codes were in harmony. Then I moved on to the next step. Braun and Clarke (2006) refer to this as the stage of revising the thematic map by reviewing the initial codes in relation to the focused codes.

- **Naming the axial themes**

With my supervisor's help I tried to keep the theme titles short, expressive and eye-catching, to instantly reflect their meaning amid the overwhelmingly large set of data. Braun and Clarke (2006) refer to this step as continuous analysis to 'define and refine' each code/theme and the overall story, thus generating clear names for the axial codes/themes.

- **Writing the final analysis report**

In this last stage of analysis I checked the conformity of the initial and focused codes in the hierarchy with the axial codes and added a few final touches. I rejected a few initial codes and coalesced certain others, both initial and focused, to fit the final report better. Once again I checked that the titles of the axial codes and the extracted themes were vivid,

answered my research question and were concordant with both the literature review and the gaps in it, as supported by Braun and Clarke (2006).

I was keen to keep the qualitative analysis chapter short, but due to the huge data set, after several attempts to make it more precise it still revealed all the size and complexity of the data. It was critical to ensure the validity and credibility of my analysis, and I took care that the flow of the story was smooth, convincing and logical.

4.4.7.2. Types of thematic analysis

- **Patterns**

Frith and Gleeson (2004) and Boyatzis (1998) explain that one of two patterns can point out the themes within data: an inductive bottom-up pattern or a deductive top-down pattern.

When using the inductive (bottom-up) approach the themes are data-driven, as in grounded theory (Patton, 1990). They are not extracted based on the researcher. I used this approach. In the inductive (top-down) approach the themes are driven by the researcher's theoretical or analytic interest in the area, i.e. are analyst-driven and not data-driven. This pattern does not provide as rich a description of the data as the inductive bottom-up pattern, according to Patton (1990).

- **Levels**

Boyatzis (1998) describes the level at which themes are extracted in TA as the semantic (explicit) level and the latent (interpretative) level. As Patton (1990) describes, the semantic approach involves the researcher extracting the themes in explicit and surface meanings of the data, not looking beyond what a respondent said and taking the literal meaning of words, as I have done. The latent or interpretative approach goes beyond the semantic (explicit) level to investigate the underlying ideas from which a theory might emerge. The development of themes is not just description; it also involves analysis, which requires interpretative action.

4.4.7.3. Advantages of thematic analysis

According to Braun and Clarke (2006), TA is relatively easy and quick to learn and apply. It is affordable for early-career researchers and the results are generally usable to educate the public. It summarises the key points of a large pool of data, provides for unpredicted impressions and ideas and allows social and psychological interpretations of the data to generate policy development.

4.4.7.4. Disadvantages of thematic analysis

Braun and Clarke (2006) find TA a poor analytical method. Although it is flexible it is also primitive, in that it hinders the researcher's decision on which data to stress. TA has limited interpretative power beyond basic description, so in comparison to other tools for analysis such as discourse analysis and content analysis it does not allow the researcher to interpret the language or minor details of the talking process.

4.4.7.5. Theory-building after thematic analysis

The well-founded theme in this qualitative research is one of stigma and discrimination against substance users and sub-categories of MARPs. Other themes are gender and religion.

4.4.8. Advantages of focus group discussions

The FGDs created vibrant social interaction among the informants themselves and between the informants and me. We shared largely the same knowledge around many issues. The FGDs were research time well spent, as the diversity of the nine MSM and seven PLHIV helped to enrich the input, which was quite noisy and aggressive at times due to agreements and disagreements over sensitive matters. I was able to use some probing techniques. As the number of females – five female IVDUs and three FCSWs – was expectedly low, I found it a privilege to get input from these rare key informants. We managed to gather them all at the same time, fully conscious, substance-free and subjectively and enthusiastically participating for 90-120 minutes. In particular, it was an extreme privilege to find them trusting us and willing to disclose their secrets and deeply personal thoughts.

The advantages of the FGDs, mentioned above, are supported by several studies. Some opinions and ideas may not be already formed in the minds of participants and may only emerge through the FGD interaction, as Hollander (2004) discusses. Hydén and Bülow (2003:308) suggest that an FGD is 'often regarded as a means for obtaining access to people's experiences, attitudes and views, rather than as a communicative and interactive event', and mention that the advantage of the FGD over the IDI is that during an FGD a participant's viewpoint might emerge only due to his or her agreeing or disagreeing with other members' statements.

Smithson (2000) asserts that participants may amplify their stories and opinions in order to convince the rest of the group or to strengthen their stand. According to Murphy et al.

(1998), qualitative tools have the advantage of allowing deeper interpretation of rationales, processes and participants' interactions with healthcare services.

Krueger (1998) and Morgan (1996) explain that in health research, FGDs are conducted to investigate and analyse the width and depth of health-service-users' experiences, e.g. substance users' use of harm-reduction and VCCT services. Since FGDs usually contain 8-10 participants in discussions lasting 90-120 minutes they are perceived as an economical way of gathering the views of several respondents simultaneously. Morgan (1996:130) defines the FGD as 'a research technique that collects data through group interaction on a topic determined by the researcher.'

Kitzinger (1994) argues that FGD participants sometimes try to persuade each other to move over to their own viewpoint. What makes FGDs unique is the vital social interaction between the participants and the moderator, and amongst themselves.

4.4.9. Disadvantages of focus group discussions

There were some disadvantages to my mode of research, e.g. recall bias and some participants overruling others who were weaker, more timid or of a lower socioeconomic class. Some attempted to show off their information by using loud voices and staging fights. Moderating the MSM and PLHIV FGDs was particularly exhausting, as I had to spend a lot of time and effort tactfully getting them back within the rules of the group and protecting the rights of every respondent. The MARPs were generally suspicious and less willing to disclose their experiences and participate, even in the presence of their own supervisors and outreach peers. The female IVDUs, especially, complained that they had recently experienced a breach of their confidentiality in a similar situation set up by a member of the Freedom Programme staff. I also noticed that at times the substance users told me what they thought I wanted to hear, regarding me as part of the establishment and seeking socially acceptable answers. Furthermore, some substance users were rather paranoid; some of their words were emotionally loaded and had a different charge to them than when spoken by non-substance users. With participants insisting on not being interrupted while sharing long stories, some of which were irrelevant at times, the sheer amount of data was overwhelming. It was an expensive technique, particularly as the substance users/MARPs recruited via the outreach programme, their snowballing peers and their outreach peers, asked for considerable monetary compensation. Additionally, it was very time-consuming before, during and after the sessions.

These methodological difficulties are discussed in several studies, among which Patton (2002), reports that in FGDs there can be distorted responses, recall error, hidden agendas and personal bias. Every participant might not have the same amount of time to express his or her ideas, especially if they are feeling shy or timid due to having a different perspective. There may be a positive or a negative personal reaction to the moderator. Fear of having one's confidentiality and anonymity breached may be present as well. Shaw and Gould (2001) stress the interviewer's role of keeping an eye on the group's psychodynamics, handling emotions such as anger and depression and tactfully protecting every member's rights within the group.

Gillham (2000) discusses some limitations to this approach. For instance, socioeconomic class differences between respondents may create anxiety and irritability in the whole group, particularly if higher-status participants directly or indirectly oppress those of lower status by taking more than their share of the floor or intimidating, interrupting, belittling or mocking them in front of the others.

4.5. In-depth interviews with individual policymakers concerned with substance use and HIV/AIDS

4.5.1. Aim

The aim of this part of the study was to examine HIV, HCV, HBV and STI prevention techniques from the perspectives of policymakers, community leaders, decision-takers, legislators and religious leaders with an interest in drugs and BBVs/STIs, mainly HIV (collectively referred to in this thesis as 'policymakers').. This input could then be applied to examine which strategies might fit best within the social and cultural norms of a conservative, religious, male-Muslim-dominated Arab society such as that of Egypt.

4.5.2. Objective

The objective was to elicit the experts' beliefs about *substance users*, i.e. not about themselves (although some of the policymakers were rehabilitation graduate substance users) to gain a deeper understanding of the substance users' accounts and responses.

4.5.3. Sampling

4.5.3.1. Rationale behind recruiting this particular group

Eleven policymakers were selected from diverse religious, educational, professional, socioeconomic and political backgrounds and from both genders:

- male consultant psychiatrist, Christian Presbyterian elder, founder and president of the Freedom Programme, feminist and human rights activist;
- male Muslim imam, cooperating with the UN and local NGOs in HIV/STI prevention and serving substance users and MARPs;
- male attorney-at-law, rehabilitation graduate (ex/recovered intravenous substance user) and legal advisor to the Freedom Programme;
- male administrative director, head of the Freedom Programme's Outreach Sector for substance users and MARPs and a rehabilitation graduate (ex/recovered intravenous substance user);
- female psychiatrist, feminist, head of the Freedom Programme's Abused Women project, head of the Programme's training department;
- male psychologist, head of the Freedom Programme's MSM and PLHIV project and deputy-head of the training department;
- female feminist, Freedom Programme substance-use therapist and supervisor of female rehabilitating substance users;
- male rehabilitation graduate (ex/recovered intravenous substance user), head of Befrienders, an NGO's serving substance users and MARPs;
- male consultant psychiatrist and head of an outreach programme for substance users and MARPs at Wa'ei NGO;
- female feminist, pharmacist and TV presenter, interested in sexuality and substance use;
- male physician, harm reduction specialist and CEO of the first PLHIV-led NGO in Egypt, Friends of Life.

See Table 5.1 in the Results chapter, which summarises and compares the samples in each study.

4.5.4. Sampling type, duration and location of in-depth interviews

The sampling strategy was purposive (judgmental) in nature.

Each IDI lasted 60-90 minutes and was conducted in Cairo or Alexandria at the premises of the Freedom Programme or of different NGOs, a doctor's office, a TV studio, a lawyer's office and a mosque.

4.5.5. Methods

The IDIs were semi-structured to seek interpretation and deeper understanding of meanings, impressions and social phenomena not derived from the questionnaire.

4.5.5.1. My role as researcher

Courtesy was extended as far as possible, allowing the interviewees to choose the most comfortable place for their interviews. Those working for the Freedom Programme were interviewed on its premises. I interviewed the other experts in their preferred workplaces, e.g. mosque, private office, clinic or NGO and a TV channel studio.

The same steps and procedures were followed as for the FGDs, including the introduction, distribution of forms, assurance of confidentiality and anonymity and securing written voluntary consent to participation and audio-recording. Although I already knew all of the interviewees, I tried to maintain a professional distance, yet with a friendly attitude. I expressed my extreme gratitude at being allowed to learn from their experience and expertise.

4.5.5.2. Discussion guide

This contained the same topics that I used for the FGDs with substance users; however, during the interviews I was able to add a question or two that seemed relevant and was interesting and pertinent to the interviewee's contribution.

- **Wording of questions**

Every attempt was made to speak to each interviewee in his or her own language according to his or her background, to allow optimum harmony between them and myself and provide the most comfortable environment in which I could derive the most benefit from the interview.

4.5.6. Data collection

It was easier and less tiring to interview one individual than a group, even though the interviews took longer than the FGDs. I could practice interviewing skills such as probing more readily and easily as I could elicit feedback instantly. I did not have to assert discipline to maintain order or follow the rules and conditions of group dynamics. I and the research facilitators did the observation, note-taking, reflexive logging and audio-taping.

4.5.7. Analysis

The IDI analysis was executed similarly to that of the FGD data, although the transcription, translation and thematic analysis were simpler and less time-consuming. I put all the IDI and FGD initial, focused and axial codes together and extracted the themes mentioned earlier from both the discussions and the interviews.

The diversity of topics, interactions and responses in the FGDs with such elite groups of substance users and their subgroups of MARPs was not present in the IDIs. However, a rich response derived from the expertise, culture, education and experience of the policymakers was achieved. As the IDIs were more focused, quieter and smoother, the analysis was easier and faster than that of the FGDs.

4.6. Ethics

A professional relationship was maintained, respecting the dignity of all participants. Time was allowed for every respondent to speak and express his or her opinion without coercion. I tried to protect the rights of shy and timid respondents by not allowing sarcasm or belittling to be aimed at any member of the group and applauded and encouraged all points of view and opinions. Although I was known at the Freedom Programme as the programme's gastroenterologist and lecturer, which gave me some hierarchical authority, I intentionally downplayed this, expressing my gratitude for the attendants' participation and telling them that I was learning from their views. I practiced basic social research techniques, maintaining a friendly, non-judgmental, pleasant and comforting demeanour with the participants, and realised the significance of always keeping up such an attitude and a smiling, kind tone when facilitating the conversation, as van Heugten (2004) discusses. Acting as an insider, I encouraged the substance users to open up frankly and share, assuming that we had a common understanding of the culture of substance use and HIV/AIDS, as Gibson and Abrams (2003) suggest.

I refrained from providing any personal or technical information during the interview. I politely apologised when asked, saying that I was more interested in their perspectives and impressions.

I tried to make sure that no harm would be inflicted on either the substance users or the policymakers. While designing the studies I made sure that all the survey questions and the discussion guide were planned in an ethical fashion and that the data collection and analysis were carried out ethically. Precautions were taken so that others would not be

able to use the research data or information about the participants or the rehabilitation programme hosting the research.

I explained the group rules to the participants, asking them to respect them: there was to be no preaching, mocking, advising, insulting, or interrupting other participants; everyone had the right to speak; anything said in the FGD room stayed there and was not to be discussed outside, etc. I tried to impose discipline tactfully and swiftly when necessary in the FGDs and to allow everybody to speak, particularly the timid and the weak, by not allowing them to be overruled by more daring, louder and intimidating respondents. A few respondents were very keen to have somebody listen to them and expressed how they had waited for such a chance as this FGD to vent their opinions and experiences.

These methods are supported by several authors and studies: Bull et al. (2013) mention that consent should imply a guarantee that the research is conducted in a respectable and considerate manner with the individuals and their communities. As Bull and colleagues (ibid) say: 'Trust and power relations play a central but complex role in consent processes, as consent cannot be a pre-fabricated set of activities that is static over time and place; consent is dynamic and a negotiated relationship'. The authors cite the Nuffield Council on Bioethics (2005): 'fully informed consent is not the goal when participants are chosen for research, however researchers should make sure that all the correct and comprehensive information is being provided to participants'. Bull and colleagues (ibid) report that many factors are involved in participants consenting to voluntary participation, including cultural and gender norms: for instance an (Arab) woman's need to obey her husband's decision about whether she joins a study, or community leaders deciding on behalf of the whole community that they will be involved in some research. Additionally, discussion prior to any research or study is a two-way learning process; the researcher studies the nature of the community of potential participants and in return the participants come to comprehend the value of joining the study.

Loading participants with too much information can misdirect their understanding of the nature and purpose of the research and what matters to them, Molyneux, Peshu and Marsh, (2004) argue. There can be a discrepancy between researchers deeming something significant which seems of no value to the participants and which they cannot relate to. When a participant mistakes her or his part in the research for routine treatment, the researcher should explain the difference to ensure that her or his voluntary decision to take part in the study (or not) is sound. The literature about bioethics clearly demarcates

the difference between understanding and acceptance. At times participants may understand the information given but not believe or accept it, for instance.

Approval to conduct the quantitative and qualitative studies was secured from the Freedom Programme Research Ethics Committee of Egypt (see appendices). The protocols for the quantitative research fieldwork, pilot qualitative study and two major qualitative studies were submitted to the committee and approval was obtained before recruits were approached for their voluntary consent to participate and to be audio-recorded, signed in front of a witness with a guarantee of confidentiality, anonymity and freedom from harm. I discussed the forms verbally with the recruits to make sure they fully understood them, as prescribed by my ethical responsibility and according to Creswell (2003, 1994) and Bowling (1998).

4.7. Study time-frame

Table 4.1, below, shows the progress of the thesis from the start in 2008 until its submission to the examiners in 2013.

5. Sexual practice and substance use: knowledge, attitude and behaviour

5.1. Introduction

The analysis included 410 participants, of whom 361 (88%) were male and 49 (12%) female. The questionnaires were self-administered by 369 participants, 41 of whom were assisted with filling them out because they could not read or write. I report in a mixed-method manner, first with the number of participants who participated in the KAP survey, the FGDs and the IDIs, with a basic description of their characteristics and sexual history; second, with their reported knowledge, attitudes and practices regarding sex and substance use; and finally making associations between the KAP scores and gender, age, education and IVDU vs. non-IVDU drug use, summarising the results.

5.1.1. Categories and numbers of substance users who participated in the surveys, focus-group discussions and in-depth interviews

The following table shows the number and subcategories of the substance-user participants taking part in the research.

Category of substance users	No. participating in KAP survey	No. participating in FGDs	No. participating in IDIs (pilot and main)
IVDUs	203 male and female	5 female	6 male
FCSWs	16 female	3 female	N/A
MSM	N/A	9 male	N/A
PLHIV	N/A	7 male	N/A

Table 5.1: Number and subcategories of participants in surveys, FGDs and IDIs

Table 5.1 shows that of the 410 substance users who participated in the KAP survey, 203 were IVDUs: three were former IVDUs recruited for the pilot qualitative study; three were former IVDU policymakers recruited for the main IDIs, and five were female IVDUs recruited for the FGD. While the questionnaire respondents were anonymous, 16 substance-user FCSWs had been anonymously recruited from the outreach sector for the KAP survey and another three also participated later in the mini-FGD. There was no way of distinguishing the responses of substance-user MSM among the anonymous questionnaires, as even if participants revealed that they had practiced sex with the same sex or had had anal sex there was no way of knowing whether they were MSM men or women having sex with women. Nine MSM substance users participated in their FGD in the main qualitative study. While there was no way to tell from the anonymous KAP

questionnaire whether participants were PLHIV substance users, seven such respondents took part in the FGDs.

5.2. Basic description and sexual history of participants and relationship between gender, age and educational level and intravenous drug use

5.2.1. Characteristics of research participants

Table 5.2 presents details of the substance users who filled out the questionnaire survey with their sexual history in relation to gender, age, educational level and intravenous substance use.

	Response	n. (%)
Gender	Male	361 (88.0)
	Female	49 (12.0)
Age	No. of responses	374
	Mean (SD) age	28.63 (6.27)
	Min-max age	16-53
Did you ever go to school?	Yes	393 (95.9)
	No	11 (2.7)
	No answer	6 (1.5)
If you went to school, what is your highest qualification?	Primary	17 (4.3)
	Preparatory	17 (4.3)
	Vocational	38 (9.7)
	Secondary	39 (9.9)
	College or institute	48 (12.2)
	University or higher	230 (58.5)
	No answer	4 (1.0)
How many years have you been living in the city where you live now?	No. of responses	314
	Mean (SD) years	26.58 (7.96)
	Min-max years	1-52
	Less than a year	10(2.4)
In the past 12 months, have you stayed away from home for a month or more?	Yes	252(61.5)
	No	139(33.9)
	Don't know	2(0.5)
	No answer	17(4.2)
Intravenous drug use	IVDUs	203 (49.5)
	Non-IVDUs	207 (50.5)

Table 5.2: Characteristics of research participants

Table 5.2 shows that the mean age (+ SD) of the respondents was about 29 + 6.27 (range 16–53); 58.50% had a college, university or higher education; 76% had lived in the city for at least a year and 61% had lived away from home for at least a month during the last year. About 49.5% of the participants were IVDUs.

5.2.2. Marriage and sexual partners

The table below shows the substance users' marriages and types of sexual partnership.

Question	Response	n (%)
Have you ever been married?	Yes	165 (40.2%)
	No	239 (58.3%)
	No answer	6 (1.5%)
If married, how old were you when you first married?	No. of responses	165 (40.2%)
	Mean (SD)	24.81 (5.0)
	Min.-Max.	14-38
What describes your current status?	Married and living with my wife/husband	85 (20.7%)
	Married and having sex with another woman/man	14 (3.4%)
	Married and not living with someone	8 (2.0%)
	Unmarried and having sex with a woman/man	134 (32.7%)
	Unmarried and not having sex with someone	129 (31.5%)
	No answer	40 (9.8%)
Is your partner married to someone else?	Yes	42 (15.0%)
	No	137 (48.8%)
	Don't know	6 (2.0%)
	No answer	96 (34.2%)

Table 5.3: Substance users' marriages and types of sexual partnership.

Table 5.3 shows that 40% reported having been married, with a mean age at marriage of 25 (range 14–38). However, only 26% reported being married and 64% reported being unmarried at the time of the survey; about half of the latter reported being sexually active.

5.2.3. Sexual history: number and type of sexual partners

The table below shows the participants' sexual history: the number of sexual partners and the type, gender and pattern of their sexual relationships.

Question	Response	n (%)
Have you ever had a sexual relationship? ('Sex' here is defined as vaginal or anal sex)	Yes	387 (94.39%)
	No	22 (5.37%)
	No answer	1 (.24%)
How old were you when you first had sex?	No. of responses	297 (72.43%)
	Mean (SD)	16.89 (3.5)
	Min.-Max.	6-31
	Don't know	70 (77.78%)
	No answer	20 (22.22%)
Have you had sex within the past 12 months?	Yes	303 (78.29%)
	No	67 (17.31%)
	Don't know	7 (1.81%)
	No answer	10 (2.58%)
Of the women/men you had sex with, in the past 12 months:		
In total, do you know how many there were?	No. of responses	202
	Mean (SD)	2.5 (2.3)
	Min.-Max.	0-24
	Don't know	65 (32.17%)
	No Answer	36 (17.82%)
How many of these were regular sexual partners, e.g. your wife/girl friend or husband/boyfriend or anybody else not exchanging money for sex?	No of responses	204
	Mean (SD)	1.4 (1.22)
	Min.-Max.	0-9
	Don't know	31 (15.19%)
How many of them were commercial sex workers?	No. of responses	173
	Mean (SD)	.85 (1.83)
	Min.-Max.	0-17
	Don't know	33 (19.07%)
How many were irregular sex partners?	No. of responses	171
	Mean (SD)	1.22 (1.84)
	Min.-Max.	0-12
	Don't know	47 (27.48%)
We've talked about having sex with people from the other sex: now, have you ever had sex with a person of the same sex?	Yes	70 (18.08%)
	No	164 (42.37%)
	No answer	153 (39.53%)
Have you had sex with a person of the same sex within the past 12 months?	Yes	26 (8.58%)
	No	91 (30.03%)
	No answer	186 (61.38%)
Have you had anal sex in the past 12 months?	Yes	18 (69.27%)
	No	5 (19.23%)
	Don't know	3 (11.53%)

Table 5.4: Sexual history, number and type of sexual partners

Table 5.4 shows the sexual activity of the sample: 94% of respondents reported having had sex, with the mean age at first sexual experience 17 years (range 6–31). Of these, 78% reported having had sex during the past year. The mean number of sexual partners

during the past year was 2.5 (range 0–24); the mean number of regular sex partners was 1.4 (range 0–9) and the mean number who were FCSWs was 0.85 (range 0–17); i.e. female commercial sex workers constituted a third of all respondents' sexual partners over the last year. Of total respondents, 8.5% (6.3% or 26/410) reported having had sex with a person of the same gender and 18 (4.3% of all respondents) had had anal sex during the last year.

5.2.4. Sexual history regarding regular sexual partners

Table 5.5, on the next page, shows the respondents' sexual history with regular sex partners.

Question	Response	n. (%)
Have you had sex with your regular sex partner, e.g. your wife/girl friend or husband/boyfriend, in the past 12 months?	Yes	162 (53.5%)
	No	2 (0.7%)
	No answer	139 (45.9%)
In the past 12 months, how would you describe your use of condoms?	Each time	10 (6.2%)
	Almost every time	6 (3.7%)
	Sometimes	39 (24.1%)
	Never	100 (61.7%)
	Don't know	2 (1.2%)
	No answer	5 (3.1%)
Think of your last regular sex partners in the past 30 days: in total, do you know how many there were?	None	28 (17.3%)
	One	52 (32.1%)
	Two	11 (6.8%)
	Three	2 (1.2%)
	Four	1 (.6%)
	Don't know	17 (10.5%)
	No answer	51 (31.5%)
The last time you had sex with that partner, did you use a condom?	Yes	14 (14.9%)
	No	48 (51.1%)
	Don't know	4 (4.3%)
	No answer	28 (29.8%)
Which of the two of you suggested using a condom this time?	Me	8 (57.1%)
	Partner	1 (7.1%)
	Both	4 (28.6%)
	No answer	1 (7.1%)
Why didn't you use a condom this time? * (More than one response could be chosen)		
I don't like it	Yes	57 (52.8%)
I didn't think of it	Yes	38 (35.5%)
We used other contraceptive measures	Yes	33 (31.1%)
I didn't think it was important	Yes	28 (26.2%)
No answer	Yes	17 (15.6%)
Question	Response	n. (%)

Question	Response	n. (%)
Question	Response	n. (%)
Other, mention	Yes	14 (13.6%)
Question	Response	n. (%)
Partner refused	Yes	5 (4.7%)
Don't know	Yes	4 (3.8%)
A condom wasn't available	Yes	1 (1.0%)
Expensive	Yes	0 (0%)

Table 5.5: Sexual history with regular sexual partners

Table 5.5 shows that of those who reported having sex with their regular sexual partners in the past 12 months, 6.2% reported using a condom each time and 62% reported never using a condom. The commonest reasons given for not using a condom the last time they had had sex with their regular partner was because they did not like it (53%); did not think of it (36%), did not think it was important (26%). and had used other contraceptive measures (26%).

5.2.5. Relationships between respondents' gender and their age, educational level, urban/rural residence and marriage

The table below shows the respondents' gender in relationship to their age, education, urban/rural residence and marriage.

Question	Response	All respondents		Male		Female	
	No.	374		333		41	
	Mean	28.6		28.9		26.1	
	Standard deviation	6.3		6.3		5.8	
	(T-test) P value	0.004					
Did you ever go to school?		All respondents		Male		Female	
	No.	407		358	% of total	49	% of total
	Yes	393	96.6%	348	97.2%	45	91.8%
	(Chi sq) P value	0.028					
What is the highest qualification you have?		All respondents		Male		Female	
	No.	401	% of total	356	% of total	45	% of total
	Primary	19	4.7%	15	4.2%	4	8.9%
	Preparatory	18	4.5%	16	4.5%	2	4.4%
	Vocational	39	9.7%	33	9.3%	6	13.3%
	Secondary	40	10.0%	33	9.3%	7	15.6%
	College or institute	49	12.2%	43	12.1%	6	13.3%
	University or higher	231	57.6%	211	59.3%	20	44.4%

Question	Response	All respondents		Male		Female	
	No Answer	5	1.2%	5	1.4%	0	0.0%
	(Chi sq) P value	0.315					
How many years have you been living in the city?		All respondents					
	No.	384	% of total				
	I don't know	31	8.1%				
	No answer	28	7.3%				
		All respondents		Male	% of total	Female	% of total
	No.	325		289	88.9%	36	11.1%
	Mean	25.77		26.43		20.43	
	Standard deviation	9.1		8.99		8.29	
	(T-test) P value	0.001					
In the past 12 months, have you stayed away from home for 1 month or more?		All respondents		Male	% of total	Female	% of total
	No.	401	% of total	353		48	
	Yes	252	62.8%	229	64.9%	23	47.9%
	(Chi sq) P value	0.139					
Have you ever been married?		All respondents		Male	% of total	Female	% of total
	No.	410		361		49	
	Yes	165	40.2%	132	36.6%	33	67.3%
	(Chi sq) P value	0.001					
How old were you when you first married?	No.	165					
	I don't know	7	4.2%				
	No answer	12	7.3%				
		All respondents		Male		Female	
	No.	146		116		30	
	Average	24.78		26.28		19.02	
	Standard deviation	5.25		4.55		3.5	
	(Chi sq) P value	0.001					

Table 5.6: Relationships between respondent's gender and age, education, urban/rural residence and marriage

Table 5.6 shows that compared to the males the female respondents were significantly younger and less likely to have ever been to school, and had lived for fewer years in the city. They were statistically significantly more likely to be married; those who were, had married younger than the men. Females were also less likely to have been to university, but this was not statistically significant.

5.3. Knowledge, attitude and practice regarding intravenous drug use and safe sexual practice

5.3.1. Knowledge, attitude and practice scores

Next I discuss the knowledge, attitude and practice of the substance-user respondents with regard to intravenous substance use and sexual behaviour.

Cases	Safe IV injection			Safe sex		
	Knowledge	Attitude	Practice	Knowledge	Attitude	Practice
Number	410	410	410	410	410	410
Mean	1.7	1.8	4.8	70.1	54.3	3.7
Maximum	12	7	20	149	99	23
Min.	0	0	0	0	0	0
St dev	2.5	2.1	5.4	25.9	20.3	4.3

Table 5.7: KAP scores for IV drug use and safe sexual practice

Table 5.7 summarises the distribution of each KAP score for safe intravenous drug use and safe sexual behaviour. The more correct answers a participant gave, the higher he or she scored on knowledge. Higher attitude and practice scores indicate better attitudes to and practices aimed at avoiding infection. Respondents tended to score higher on safe sexual practice, which had more component questions, than on safe intravenous drug use. The absolute values of these scores cannot be interpreted in isolation, but they are informative when comparing different subgroups of the study sample, as in the following tables.

Table 5.8 compares IVDUs' and non-IVDUs' KAP scores on IV drug use and sexual behaviour.

	IVDU	Non-IVDU	Mann-Whitney Test
	Median	Median	P-value
Knowledge (IVDU)	2.000	0.000	<0.001*
Attitude (IVDU)	3.000	0.000	0.001*
Practice (IVDU)	10.000	0.000	0.001*
Knowledge (sexual practice)	70.000	69.000	0.522
Attitude (sexual practice)	57.000	58.000	0.783
Practice (sexual practice)	2.000	2.000	0.248

Table 5.8: Comparison of intravenous and non-intravenous drug users' knowledge, attitude and practice scores on safe intravenous drug use and safe sexual practice

Table 5.8 shows that the IVDU respondents scored significantly higher on knowledge, attitude and practice concerning intravenous drug use than the non-IVDUs. Their KAP scores regarding sexual practices did not differ from those of non-IVDUs.

5.3.1.1. Supporting qualitative data

Our qualitative results were in line with the quantitative results, as they showed that substance users had low to moderate knowledge about safe intravenous injection and safe sex; however, this was not necessarily reflected in their attitude or behaviour, both of which were risky.

Substance users' accounts: in the group discussion the female IVDUs gave controversial responses about their knowledge of BBVs/STIs. They stated that an active substance user would not care about protecting him- or herself or anyone else from BBVs/STIs while engaging in substance use; e.g. an active substance user did not care much whether he or she overdosed and died. A few IVDUs had never heard of HBV, HCV or HIV, and believed in myths that lead to dangerous attitudes and behaviour, such as that expressed below:

The problem is not in the syringe. HCV is not necessarily transmitted through syringes – many people think HCV is transmitted if they use someone else's syringe. My own syringe, if used more than once, will give me HCV: if it is left on the floor it will infect me with HCV. If it has been thrown away [and has been in the bin] for a week and then I inject with it again, I'll get HCV. HCV is located in the plastic part (pusher/piston) – even if it's boiled, the virus stays in the needle, even if you wash it with concentrated sulphuric acid. (FGD, female IVDU)

Other IVDUs in their FGD agreed with the above myths and mentioned others; one said that everyone normally has a percentage of HCV present in his or her blood which remains dormant. Another colleague claimed that HCV is not transmitted by unsafe injection, based on the fact that many non-substance users had been infected having never shared needles. Another substance user believed that HCV is embedded in the drug manufacturing process, with drugs contaminated with 'blood, infant skulls ground to a powder, tablets and dust' (FGD, female IVDU).

Policymakers' accounts: the policymakers agreed in their IDIs that substance users' poor to moderate knowledge of BBVs/STIs meant that they had not changed their attitudes to risk or their behaviour.

This matches the quantitative results, which also show that male substance users and IVDUs had better KAP about safe intravenous injection than females and non-IVDUs.

This could be related to a respondent bias on the part of IVDUs and the rehabilitation spirit in the recovery centres, as discussed in the quantitative results. Female substance users generally had better KAP concerning safer sex than male substance users, but this was statistically insignificant. Respondents with a university education or higher, and those aged over 20 knew more about safe sex than those with below-university education and younger respondents. Females and IVDUs were statistically predicted to score higher on attitude to sexual practice than males and non-IVDUs.

5.3.2. Education

I next compare the educational level of the respondents with the KAP scores for IV drug use and sexual behaviour.

	University education and above	Below university education	Mann-Whitney Test
	Median	Median	P value
Knowledge (IVDU)	0.000	0.000	0.791
Attitude (IVDU)	0.500	0.000	0.744
Practice (IVDU)	0.000	0.000	0.820
Knowledge (sexual practice)	76.000	63.000	0.001*
Attitude (sexual practice)	59.000	56.500	0.141
Practice (sexual practice)	2.000	2.000	0.454

Table 5.9: Level of education and knowledge, attitude and practice scores for intravenous drug use and sexual practice

Table 5.9 shows that respondents with a university education and above scored significantly higher on knowledge about sexual practice than those with lower than university education. However, other scores (KAP regarding IV drug use and sexual attitudes and practice) did not differ significantly.

5.3.2.1. Matching qualitative data

Substance users' accounts: the data on the influence of education on substance users' knowledge, attitudes and practice regarding safe sex and safe injection was in line with my qualitative data, as discussed below.

In their FGD a few substance user-MSM said that IVDUs with little education living in low-class neighbourhoods did not know about BBVs/STIs, as many lived and injected together in the same place without taking precautions. FCSWs reported in their FGDs that their elite clients used condoms during commercial sex, demonstrating once again that higher education is associated with better KAP of safer sex.

Policymakers' accounts: the policymakers concurred with the substance users' accounts. In his IDI, the male CEO of the PLHIV's NGO said that most substance users had not heard much about HBV either. Only those who had travelled abroad (indicating a higher socioeconomic class and education) had greater awareness of BBVs/STIs, and their KAP thus improved.

The analysis revealed that higher education generally correlates with better knowledge regarding safe sex, which matches the quantitative results: respondents with university education and above scored significantly higher on knowledge about safe sexual practices than those with less education.

5.3.3. Age

Table 5.10 correlates the age of the respondents with their KAP on IV drug use and sexual behaviour.

Age vs. KAP scores for IV drug use and sexual practice		
	Spearman R	P-value
Knowledge (IVDU)	0.035	0.494
Attitude (IVDU)	0.029	0.570
Practice (IVDU)	0.026	0.618
Knowledge (sexual practice)	0.170	0.001*
Attitude (sexual practice)	0.032	0.531
Practice (sexual practice)	-0.069	0.181

Table 5.10: Correlation between age and knowledge, attitude and practice scores for intravenous drug use and sexual practice

Table 5.10 shows a weak but significant ($R=0.17$) positive correlation between age and knowledge of sexual practice, i.e. the older the respondent the more she or he knew about safe sexual practice. Other scores were not associated with age.

5.3.4. Analyses of knowledge, attitude and practice scores

The analyses above show that the respondents' KAP scores for sexual practice were associated with gender, age, education level and intravenous drug use. Because these factors are associated with each other, the various associations were likely to be confounded. I therefore carried out multiple ordinal logistic regression analyses to estimate the unconfounded associations between these explanatory variables and each score. I used ordinal logistic regression because each score was expressed as an ordinal integer and was not normally distributed. The odds ratios from the ordinal logistic regression were odds ratios of having a higher score. Multiple regression analyses were

not necessary for the KAP scores for IVDU drug use, which were not associated with more than one of these explanatory variables.

Table 5.11, below, correlates the respondents' knowledge of sexual behaviour with the four explanatory variables; age, gender, education and intravenous drug use.

	Odds ratio	95% CI		P-value
		Lower	Upper	
Gender				
Male	1			
Female	1.928	0.803	4.6	0.142
Age				
Up to 24 years	1			
25–29 years	1.958	1.146	3.34	0.014
30–34 years	1.632	0.943	2.826	0.08
≥ 35 years	2.084	1.094	3.968	0.025
Education				
Primary and preparatory	1			
Vocational	0.82	0.265	2.28	0.704
Secondary	0.703	0.256	1.926	0.494
College/institute	1.448	0.564	3.713	0.441
University or above	0.77	0.342	1.731	0.528
No answer	0.606	0.179	2.046	0.42
IVDU				
Non-IVDU	1			
IVDU	1.478	0.989	2.207	0.056

Table 5.11: Scores for knowledge of sexual practice and gender, age, education and intravenous drug use: ordinal logistic regression model

Table 5.11 shows that older age was independently associated with greater knowledge of sexual practice, and intravenous drug use was marginally associated with higher scores ($P=0.056$). Although females and university students were more likely to have higher knowledge scores, these differences were not statistically significant.

The qualitative analysis complemented the quantitative data by adding depth to my understanding of the substance users' and policymakers' accounts about BBVs/STIs and their prevention, and about recovery, relapse and the complications of substance use.

Policymakers' accounts: there were no IDIs with female rehabilitation graduate substance users, only male graduates, of whom the majority had stated that they had made many failed attempts to stop using drugs using methods such as locking themselves up at home, consulting doctors, making a pilgrimage to the Holy Land, substituting the main drug with a lighter one, employing witchcraft, or travelling abroad. However, they finally

recovered with peer-to-peer help when a friend told them about recovery through the Freedom Programme. They had been touched by the examples of successful peers, who spoke to them in their own jargon, discussing the same past experiences and sensations unconditionally and freely, which encouraged them to quit themselves.

Regarding knowledge of harm reduction, one male rehabilitation graduate claimed that he never used condoms with his wife although he was HCV positive. The rehabilitation graduates agreed that pharmacies refusing to sell clean syringes to substance users augmented the problem by causing more complications, such as the continued sharing of needles, syringes and preparation kits and injecting using dirty water.

In their IDIs, two male rehabilitation graduates stated the best methods of BBV/STI prevention in order of effectiveness: peer outreach and education, television, and religious discourse. A third agreed, but placed them in a different order.

When asked about obstacles to recovery, one male rehabilitation graduate cited Muslim-Christian tension and its drawbacks in society; police officers exploiting substance users to get ahead in their careers; and the police not delivering arrested substance users to rehabilitation programmes.

There were discrepant responses to questions about notifying a partner of HIV seropositivity: most of the male rehabilitation graduates in the IDIs said that they would notify their wives and that both men and women should notify each other if they were HIV positive. Only one said that he would not notify his wife, but would divorce her discreetly, and a few rehabilitation graduates said that they would not have sex with their wives if their wives proved HIV positive; however, they would not divorce them but would remarry without causing a scandal or shaming them openly by breaching their confidentiality. One rehabilitation graduate said that he would help his HIV-seropositive wife and would not seek separation or a divorce.

Substance users' accounts: in the FGD a substance-user-MSM stated that better knowledge about BBVs/STIs improved MSM's recovery via the sex education in the rehabilitation programme. Prevailing myths, however, made many substance-user-MSM reluctant to undergo HIV testing for fear of arrest, isolation and scandal. A peer MSM argued that knowledge of BBVs/STIs was much better among MSM who had been rehabilitated through rehabilitation programmes than among those using alternative means such as the classic locking up, pilgrimage, etc. listed above. Another MSM who had contracted HCV from sharing syringes in prison said that he was astonished at

himself, as even though he had moderate knowledge about HCV from watching television, which had shown him how it is transmitted through sharing needles and syringes, his dangerous and careless attitude and behaviour had still led him to share syringes. Another example of persisting myths and incompletely-grasped KAP emerged during a hot debate among MSM regarding the purpose and benefit of condoms, and whether they are for contraception or the prevention of BBVs/STIs. Remarkably, a few MSM believed that condoms are only for contraception.

Policymakers' accounts: the policymakers' accounts agreed with those of the substance users and added a new perspective.

All male rehabilitation graduates stated that they would notify their wives if they were infected with HCV, although one said that having done this, his fiancée had deserted him after a four-year engagement.

Female IVDUs recommended that VCCT centre contact details should be accessible through phone directories and newspapers, and that awareness messages should be free of scare tactics. Female IVDUs and FCSWs in their FGDs thought that HIV/AIDS is an imported disease.

A male psychiatrist, the founder of the leading drug rehabilitation programme in Egypt, argued that there is growing knowledge among Egyptians of the danger of HIV transmission through unsafe injection and unsafe sex. However, there are far fewer rehabilitation programmes than are needed, and there has been much less awareness-raising leading to behavioural transformation than is required. He mentioned that knowledge about BBVs/STIs does not change behaviour in itself, as misconceptions abound: men having sex with a woman from a lower or the same low socioeconomic classes use condoms assuming that she has poor personal hygiene, whereas men from a high socioeconomic class having commercial sex with a woman from the same high class do not, assuming that her personal hygiene is better. The substance users judged FCSWs by their external appearance, and hence caution was not always practiced. They generally did not know that condoms can prevent STI transmission; MSM thought that condoms were only useful for family planning, as mentioned earlier.

Analysis revealed that the respondents had moderate knowledge about BBVs/STIs, as denoted above in the account of the MSM in the FGD who got proper information about the modes of transmission of HCV, and his peer who said that rehabilitation graduates of rehabilitation programmes working the NA 12-step substance abuse recovery programme

had more knowledge about BBVs/STIs. This moderate knowledge of BBVs/STIs was confirmed by the account of the male psychiatrist, who pointed out the increase in Egyptians' knowledge of the relationship between HIV infection and risk behaviours such as unsafe sex and unsafe injection. However, my analysis also found poor knowledge and myths around BBVs/STIs, as shown in the accounts of the female IVDUs and substance user/FCSWs who claimed that HIV/AIDS has been imported into Egypt. This was also confirmed by the account of the male psychiatrist who mentioned the unsafe sexual behaviour of men regarding FCSWs, relying only on their external appearance, and the myths that MSM believe regarding condom use. This all matches my quantitative data.

The following table correlates sexual behaviour with the four explanatory variables; gender, age, education and intravenous drug use.

	Odds ratio	95% CI		P-value
		Lower	Upper	
Gender				
Male	1			
Female	1.583	0.664	3.772	0.300
Age				
Up to 24 years	1			
25–29 years	1.022	0.597	1.751	0.936
30–34 years	1.191	0.685	2.071	0.534
≥ 35 years	1.264	0.645	2.476	0.495
Education				
Primary and preparatory	1			
Vocational	1.604	0.592	4.339	0.352
Secondary	1.701	0.650	4.451	0.279
College/institute	2.238	0.8761	5.720	0.092
University or above	1.670	0.765	3.645	0.198
No answer	1.794	0.554	5.808	0.329
IVDU				
Non-IVDU	1			
IVDU	1.423	0.522	3.137	0.247

Table 5.12: Sexual practice KAP score and gender, age, education and intravenous drug use: multiple logistic regression model

Table 5.12 shows no significant association between age, gender, education, IVDU and sexual practice scores. The qualitative findings were in line with the findings of the above table and are presented further in the next section.

5.4. Relationship between sexual behaviour and substance use

5.4.1. Substance use and sex

Substance users' accounts: in their FGDs, FCSWs and MSM mentioned that their experience of sex was better under the influence of drugs. Female IVDUs agreed, and added that drugs prolonged the duration of the sexual encounter. Substance users had a consensus about Tramadol, a strong analgesic with narcotic action and the most popular and affordable drug on the Egyptian market, which is currently used by all categories of substance users. Most of the MSM considered Tramadol an enhancer of sexual potency; a few disagreed, saying that it merely stiffens the penile erection but does not increase sexual appetite (libido).

FCSWs reported that they rarely work according to any code of ethics and cheat each other and steal from the apartments of clients to which fellow FCSWs send them, sometimes under the influence of drugs. They claimed that all FCSWs care about is making more money than one another and getting high on drugs, living day to day.

Policymakers' accounts: the policymakers said much the same: a male entrepreneur physician working with MARPs in Alexandria said that sex leads to substance use, and substance use leads to sex, in a vicious circle, and that in his opinion the same applies to gay sex and substance use:

There is a strong vicious circle between substance use and gay sex. An MSM starts with a couple of tablets then enters the world of substance use due to the stigmatisation and discrimination against him, or a substance user sells himself to men for drugs, so it is sex for drugs or drugs for sex. This is the cycle that all people working in the field know. (IDI, male entrepreneur physician working with PLHIV)

The entrepreneur also mentioned the shifting patterns of substance use in Egypt due to Tramadol, which became popular a few years ago. The data analysis showed that it is easy to get almost any drug over the counter in pharmacies in Egypt, and this has facilitated the use of Tramadol and its sale on the black market.

5.4.2. Forms of sexual behaviour

5.4.2.1. Heterosexual commercial sex

- **Commercial vs. romantic sex**

The consensus among the FCSWs was that they enjoyed romantic sex more than commercial sex. However, they claimed that the majority of FCSWs love much but rarely

receive love. An FCSW reported that she loved sex in any form, commercial or ‘for love’, as they called it, and as long as she was practising it she might as well enjoy it.

- **Honesty vs. dishonesty regarding HIV notification**

A few FCSWs confirmed that a FCSW infected with HIV would not normally risk losing clients for the sake of honestly notifying them of her HIV seropositivity, and if she asked a client to put on a condom he would suspect her of being HIV-positive and give her a hard time.

- **Factors leading to commercial sex**

There was consensus among the FCSWs on some of the leading factors that had driven them to practice commercial sex: lack of jobs and stability, seduction by men outside marriage, their love of sex, the influence of bad friends, individual vulnerability, and curiosity in spite of having been warned of the consequences.

In an FGD one FCSW complained bitterly of the lack of support and mixed messages that such women receive from their homes and families due to weak familial bonds. She particularly missed having a father figure to respect and fear. She said that their families encouraged their daughters to engage in commercial sex as a source of family income, to the extent of beating and grounding them if they disobeyed, simultaneously stigmatising them and shutting their eyes to what their daughters’ were doing.

5.4.2.2. Same-sex relationships

MSM scornfully reported the growth of a new category of MCSWs: a professional group that have recently entered the field through Internet blogging who meet in secret places. MSM agreed that MSM selling sex to women experienced less intensely-enacted stigmatisation than those who sold sex to men.

The analysis revealed that the severe economic deterioration in Egypt after the revolution has led MSM not only to offer sexual services to Arab tourists in the summer but also to expand their economic opportunities by approaching Egyptian men. A small number of straight men work in the commercial gay sex industry for the money.

5.4.2.3. Rape

Substance users’ accounts: some FCSWs argued that psychological trauma had driven them to drugs and commercial sex. One reported that she had been traumatised by divorce from the first man she had loved and married when she was young, and again when raped

by a male client during commercial sex. Accordingly she stopped practising heterosexual sex and since then had only had sex with her girlfriend because it involved no violence.

Policymakers' accounts: the imam working with substance users contended that female substance users are the worst hurt by substance use. They often have to resort for their daily drugs to nomadic drug dealers on the outskirts of towns, where they are vulnerable to being waylaid and raped or even killed and left in the desert. He claimed that the girls feel completely 'deviant from humanity' and 'hit the bottom' fast.

The table below correlates attitude to sexual behaviour with the four explanatory variables; gender, age, education and intravenous drug use.

	Odds ratio	95% CI		P-value
		Lower	Upper	
Gender				
Male	1			
Female	2.738	1.012	7.414	0.047
Age				
Up to 24 years	1			
25–29 years	1.318	0.769	2.258	0.314
30–34 years	1.439	0.829	2.497	0.195
≥ 35 years	1.301	0.673	2.516	0.434
Education				
Primary and preparatory	1			
Vocational	0.656	0.237	1.815	0.417
Secondary	0.747	0.269	2.072	0.576
College/institute	1.592	0.618	4.095	0.335
University or above	0.778	0.346	1.743	0.541
No answer	0.511	0.156	1.672	0.267
IVDU				
Non-IVDU	1			
IVDU	2.414	1.122	7.065	0.033

Table 5.13: Attitude to sexual practice with gender, age, education and intravenous drug use: ordinal logistic regression

Table 5.13 shows that female gender and IV drug use are independently associated with a higher attitude score for sexual practice, while age and education level are not: i.e. higher attitude scores for sexual practice were predicted for females and IVDUs. My qualitative data supports these findings, as discussed in the next section.

5.4.3. Myths and vulnerability to blood-borne viruses and sexually-transmitted infections

Substance users' accounts: In the FGD, one FCSW clearly demonstrated her belief in myths about sex and BBVs/STIs. She claimed that she could protect herself from BBVs/STIs by not allowing her clients to ejaculate inside her, thinking that semen poses the only threat. All the FCSWs disclosed that they could not protect themselves from BBVs/STIs; they usually lost arguments about condom use with clients, even when their clients asked for anal sex, which concerned the FCSWs even more. A few FCSWs admitted that sometimes they forewent negotiating over the use of a condom in order not to lose the client; they also agreed to sex even when they had their menses. They rolled tissues and inserted them in their vaginas, simulating tampons, furthering a high risk of BBV/STI infection for both partners. The male clients did not usually notice this.

The analysis revealed that FCSWs appeared to have a false sense of security and control over their situation.

The FCSW participants claimed that there were rumours in their population that HCV is not an STI.

Policymakers' accounts: the policymakers concurred with the substance users' accounts. Furthermore, the male CEO of the NGO serving PLHIV commented that eminent Egyptian doctors do not publicly identify HCV as an STI, but even so it is a matter for fear and concern for substance users.

5.5. Religion, drugs and AIDS

5.5.1. How Islam and Christianity influence knowledge, attitude and practice regarding substance use and sexual behaviour

Substance users' accounts: in spite of the FCSWs' belief in the myths mentioned above and their profession of commercial sex, they said that they admired strict Salafi televangelists who deliver sex education to families using non-judgemental religious discourse. One FCSW was particularly touched by the former Coptic Orthodox Pope's convincingly compassionate approach to sinners.

Policymakers' accounts: the policymakers approved the accounts of the substance users and added further perspectives.

A male rehabilitation graduate and legal advisor argued fiercely for the need to separate religion from the state. He stated that the influence of religion on society is not enough to

transform sinners. Whenever religion is resorted to it is wielded harshly: the male rehabilitation graduate and legal advisor quoted Muslim religious leaders talking about God's punishment of sinners, saying: 'If you commit adultery, others will commit adultery against you seventy-fold'.

The imam serving substance users and MARPs approved of the BBV harm-reduction services giving away clean syringes but not of the provision of free condoms, for fear of encouraging vice. He claimed that Muslims and Christians in the West give away condoms because they are culturally different from Muslims and Christians in the conservative East, and insisted that Islamic and Christian religious discourses in Egypt should be included in the renowned NA 12-step substance abuse recovery programme.

The analysis revealed that while Muslim religious leaders have banned the giving away of condoms, Christian FBOs gave them out comfortably. After the media put severe pressure on an international Catholic FBO harm-reduction centre that had been providing condoms, the centre was compelled to close down after many years of success with MARPs. Substance users live in a religion-bound society and seek the opinions of their religious leaders even when they know that these leaders scorn them.

There has been conflict within the large religious institutions about introducing sex education in schools or universities. In his IDI a male psychologist explained that the concern was about opening children's eyes to sex, which is taboo, at too young an age. The religious leaders used the excuse that society has always used: 'We [parents] had no sex education but we're doing fine [having sex and making children]'. Another male rehabilitation graduate expert agreed that the handling of sex education by religions is a problem for Christians and Muslims in the Arab world.

One female psychiatrist reported the tremendous influence of popular televangelist Muslim religious leaders in mobilising Egyptian households. She advised that in order to engage the hugely influential and supportive army of the family in BBV/STI prevention through the media, a beloved and trustworthy religious leader must be enrolled as a media-savvy spokesperson.

The data analysis showed a particular Muslim televangelist adopting the successful preaching style of a famous Presbyterian pastor in Cairo. As this was unprecedented and extraordinary in typical Muslim discourse it succeeded in reaching different strata of society and tackling sensitive issues such as substance use.

5.5.2. The influence of fatalism on knowledge, attitude and practice regarding safe sex and safe injection

Substance users' accounts: several MSM reported developing an awareness of BBVs/STIs when they went for regular HIV testing at VCCT centres; however, they also reported situations in which they ignored this and did not wear a condom. The careless embrace of myth and fatalism was presented by a few MSM who argued that they tried to protect themselves by using condoms, but if their partners refused they just succumbed and left it to God to protect them. They did not take precautions if their partner looked well and had no external symptoms of HIV/AIDS, as also mentioned by the psychiatrist, above, who reported that lower-class clients used condoms with FCSWs of the same class while upper-class clients usually did not take precautions with women of elite appearance.

The analysis revealed a mixture of defective KAP and belief in fatalism, which was sometimes seen as total surrender to God and thus a sign of faith which people often bragged about, as mentioned. Any logical negotiation or argument of any sort, even if scientifically-based, was fiercely attacked as blasphemy or heresy. This has particularly increased in the new politico-religious situation under the MB and other Salafi groups.

Policymakers' accounts: the policymakers' accounts generally matched the substance users' accounts.

During the pilot IDIs all the rehabilitation graduates expressed some animosity towards God, as if He were punishing them or was the reason behind all the misery in which they lived. After recovering they realised His mercy and how lucky they were to survive and be able to reach out to other substance users to save their lives in turn. They agreed that balance could be achieved in their lives, not only by quitting drugs and alcohol but also by quitting risky sexual and injection behaviour. They argued that the moderation that they had learned in recovery should be applied to food, drink, and everything else.

5.6. Substance use

5.6.1. Myths

Substance users' accounts: one PLHIV denied the existence of drug withdrawal symptoms, claiming that it was all 'autosuggestion' and simple enough to treat with a sleeping tablet. He repeatedly swore by God that the symptoms are much lighter than other substance users claimed.

This was different to the other substance users' and policymakers' contributions about recovery and relapse. By saying this the PLHIV was enabling himself to carelessly continue using drugs, erroneously thinking that he could quit at any time with minimal side effects. It was certainly a form of denial, as he was still on drugs. Most substance users were ignorant or confused about the chemical nature of the drugs they used, apart from their addictive effect. This delayed their decision to quit and risked infection with BBVs/STIs.

Even IVDUs from a high socioeconomic class and with higher education still held on to the myths and urban legends that are particularly common within the population of substance users; as mentioned before, they believed that manufacturers put HCV in the heroin powder and cheat by mixing heroin with ground-up infants' skulls.

The higher the substance users' education, the greater their KAP regarding safer sex and injection. The results of the quantitative research agree with the quantitative findings: respondents with a bachelor degree and above scored significantly more on knowledge about safe sexual practice than those with less than a university education. However, their knowledge did not appear to extend to safe practice in their drug use.

Policymakers' accounts: the policymakers' opinions matched those of the substance users.

One psychiatrist reported that desperate IVDUs share needles that are inevitably contaminated with BBVs/STIs. He stressed that most IVDUs' friends have BBVs/STIs, so IVDUs believe that they will get infected anyway. This fixed belief leads to a lack of interest in taking a seropositivity test.

5.6.2. Knowledge failing to transform attitudes or behaviour around safe intravenous injection

Substance users' accounts: many IVDUs in their FGD believed the myth that some of the drugs they used were contaminated by BBVs/STIs, e.g. HCV; however, they did not change their risk attitude or practice, and in fact this seemed to make matters worse. One IVDU doubted the cleanness of the drugs she took and consequently was not much concerned about using clean syringes:

Lots of diseases are transmitted in the papers wrapping the drugs. Do you know what the manufacturer or dealer put in it? He might have got it from a wall [paint] or a well [dirty water] – do you think after all this that I would bother about the syringe? I might be injecting dust! (FGD, female IVDU of high socioeconomic class)

Policymakers' accounts: the policymakers and the quantitative results agreed with the substance users' own accounts that most had low to moderate knowledge of safer sex and injection. However, even this reasonable level of knowledge did not transform their attitudes or practice.

A male psychiatrist working with substance users and MARPs noted that knowledge of BBVs/STIs is not linked to healthy practice. He argued that in spite of knowing about HIV and HCV transmission, substance users still share needles and practice unsafe sex. He estimated that in line with my quantitative finding that IVDUs' knowledge of safe injection is better than their attitude and practice, roughly half of the IVDUs he met had shared a needle at least once.

The male legal advisor claimed that fewer than 10% of all substance users in Egypt have proper knowledge of HIV and HCV.

A female psychiatrist elaborated in her IDI that substance users are exposed to HIV in two ways: through substance use and through unsafe sex with multiple sex partners. She also said that while substance users might know a bit about the threat of substance use leading to BBV/STI infection, their drug use can be the centre of their existence, and hence they do not have the interest or self-control to practice caution.

5.6.3. Rehabilitation and lessons learned

Substance users' accounts: one male PLHIV argued that rehabilitation may be easy or hard, depending on the nature of the drug and the pattern of substance use, and particularly hard for IVDUs. He affirmed that any kind of substance use can be recovered from and that there are many ways of recovering without resorting to detoxification centres or hospitals, such as *baladi*, the traditional method of locking oneself up at home for a week (known in the West as 'cold turkey'). Turning to spirituality, e.g. an *Umrah* (pilgrimage to the Islamic holy lands in Saudi Arabia) and getting closer to God was another method agreed upon by several substance users. To distinguish true from false recovery and the motives behind successful recovery, another male PLHIV argued that substance users occasionally get themselves admitted to hospital, not so much to be treated but to persuade themselves that they have done all they could and to clear their conscience, or to satisfy people around them.

The data analysis showed that some substance users like to get themselves admitted to a detoxification centre for treatment of drug withdrawal symptoms but do not continue into rehabilitation and recovery. Once they leave the detoxification centre with their blood

clear of drugs they go back to using them. It seemed that reintroducing the drugs may give them the same initial pleasure that they experienced when first trying them. In hospitals and rehabilitation programmes there are rehabilitating substance users who have relapsed, intentionally or unintentionally, 17 times and more. However, most of these had not been enlisted on rehabilitation programmes through peer outreach. Recovery in hospital is not as beneficial as working through the rehabilitation programme with its daily activities and following the steps of the NA 12-step substance abuse recovery programme, having a supervisor and staying for five or six months in a peer group, rehabilitating away from the old enabling environment (see section 2.3).

Policymakers' accounts: the policymakers agreed with the substance users' accounts and contributed varying responses.

A female psychiatrist expanded on recovery:

Recovery is like riding a bicycle up a hill: a substance user should pedal all the time so as not to relapse. If he stops he will slide down, and if his effort is small or he slows down, this recovery will only be an abstinence, not recovery [a genuine transformation]. (IDI, female psychiatrist and head of an abused women project)

The data analysis showed a strong link between this and the Prochaska and DiClemente (1982) model of the transtheoretical method/stages of change. These authors explain that it is normal for people to require several cycles through the stages of recovery before lasting change is achieved. *Relapse* is viewed as a normal part of the process rather than as failure. The substance user goes through several stages: *pre-contemplation*, during which the idea of change is not taken seriously; *contemplation*, in which substance users contemplate the need for a change but do not take any active steps; *action*, when they finally determine to do something; and *maintenance*, in which the change is kept up for some time. Generally after maintaining a change, whether to diet, quit a smoking habit or exercise, a substance-user sooner or later breaks down and reverts to the first or second stage.

In my recommendations I emphasise the significant issue of abstinence vs. recovery. While 'abstinence' means quitting drug use, 'recovery' means honest, integrated work with the NA 12-step substance abuse recovery programme. Substance users sometimes pretend to be rehabilitating by only talking about the programme without acting on it, and as a result fail to rehabilitate, or quickly relapse.

When I asked the female psychiatrist about the average number of years of recovery before a substance user becomes trustworthy enough, in her opinion, to join a

rehabilitation school, engage in training or work, or marry, she replied that it generally takes two years, taking individual variations into consideration. Roughly, the first year is for focusing on recovery and the second is used to gain maturity, fill in the blanks and learn what the substance user missed during the period of his or her substance use. She stated that foreigners and Egyptians who had tried rehabilitation and recovery abroad admired Egypt's successful drug rehabilitation programmes. The new trend among Egyptian substance users was quitting. She claimed that quitting rates were increasing:

The trend over the past years used to be 'We will take drugs' – the new trend is 'Together we can'; 'We will fight'. This spirit of peer support and togetherness is the most important thing and can do much to help rehabilitation and prevention, so a substance user can say: 'I want to quit just like such-and-such a person quit'. (IDI, feminist female psychiatrist)

She described how a substance user feels respected and accepted when receiving applause from his or her rehabilitation graduate peers for quitting drugs. Besides family support, such applause is the most encouraging factor in initiating and maintaining recovery. She considered this the most influential approach, and gave as an example one of the most successful slogans used by outreach peers in her programme: 'I am offering my services to you until you make your decision [to quit] on your own'. This slogan, she claimed, had been getting remarkably positive feedback for several years.

One male rehabilitation graduate heading an outreach sector dealing with MARPs described recovery as the skill to change negative thoughts into positive ones. If a substance user is weak, she or he will go back to square one before completing her or his recovery. He described the big leap that happens to substance users after recovery, having rid themselves of the destructive behaviour which has so hurt them and others. They start to experience deep insights, honesty and awareness after seriously working with the NA 12-step substance abuse recovery programme.

The imam serving substance users reported helping to treat several male and female substance users by getting them into the mosque and offering them respect and appreciation. This provided a first base from which they were capable of dealing with life as normal human beings. The imam said that substance users pass through a period when they feel they have lost their humanity through their impurity, and such treatment restores their humanity to them.

The analysis showed that this merciful, compassionate and non-judgmental approach by religious leaders is highly effective. Later in this chapter I describe how MSM and FCSW

substance users preferred and responded more to this type of religious discourse, and even recommended it as a preferred means of BBV/STI prevention.

Lessons are learned about substance users after recovery. A male legal advisor who was also a rehabilitation graduate explained that the experience of substance use had taught him lessons: while it had deprived him of self respect, family and society's admiration, status, money, career and good health, it had given him other experiences: his recovery through the transformatory NA 12-step substance abuse recovery programme, imprisonment, helping others via a productive role in society, regaining his self respect, family and friends, and fighting the stigmatisation and discrimination wisely.

5.6.4. Relapse

Substance users' accounts: in their FGDs the substance users' accounts varied. One PLHIV gave the example of a factor of the NA 12-step substance abuse recovery programme that jeopardised his recovery: he had disregarded the first step (avoiding anyone and anything reminding him of his substance use, e.g. friends, places, habits and tools). He explained that carelessness about this step caused some substance users to relapse, going back to their old lifestyle or frequenting places where alcohol and drugs were available, such as weddings. He added that the further into the period of recovery, the greater the danger. This is why there is a programme called Just for Today (Narcotics Anonymous, n.d.) offering daily meditation to help rehabilitation graduates to keep a grip on their recovery day by day. This is an NA fellowship-approved programme of literature for acquiring serenity and strength to maintain recovery day by day, as mentioned in section 1.5.

A fellow PLHIV emphasised that overconfidence and carelessness during recovery is a factor in relapse. He gave the example of a rehabilitation graduate who, feeling overconfident after recovery, sometimes pushed aside his supervisor and refused further help, thus piling up negative pressure and then falling at the smallest hurdle.

God and fatalism – denying responsibility for one's actions – were given as an excuse for relapsing by a third PLHIV. He said that this was a delusion caused by what he called 'the devil inside him' to fool him and make him believe that he was able to quit at any time.

Contrary to the majority of substance users, a few PLHIV admitted that recovery was not appealing and they did not enjoy life without drugs, which relieved their frustration at

their failures. One such PLHIV stated that for him drugs were necessary for everyday activities:

I don't know how to have sex without drugs. I don't know now how to talk freely without drugs. I used to eat, drink, dance, go to weddings, and I knew how to enjoy things [under the influence of drugs]. Dropping [substance use] has devastated my life. (FGD, male substance-user-PLHIV)

Policymakers' accounts: the policymakers, however, had another opinion: the urge to return to taking drugs after recovery was reported as a causative factor in relapse. In the IDI a male rehabilitation graduate who was head of an NGO's outreach sector explained the NA 12-step substance abuse recovery programme's strategies for overcoming this urge:

A relapser is a rehabilitation graduate who knows that his substance use is a disease and that his urge to take drugs is an obsession – an idea just keeps spinning in his head, and he gets into the struggle of taking drugs or not until he's finally exhausted and takes drugs for relief, forgetting that it's just an idea and he can ignore it, and with skill and in time its intensity will decrease. At first the idea comes in the form of an order, with no time to think, but when he gets into recovery he is trained to create a time lag between the idea and the time of its execution, and what to do in the time in between. This is what really counts. (IDI, male rehabilitation graduate)

5.7. Summary of results

Most of the substance-user respondents were male, urban, in their twenties, highly educated, sexually active from an early age and IVDUs. Most had moderate knowledge of HCV and HBV, but little knowledge about HIV or its association with sex and injecting drugs.

Their sexual activity was assessed via questions asking if they had ever been married, the number of sexual experiences and partners that they had had over the last year and whether these were with regular partners or commercial sex workers. Sex with FCSWs constituted a third of the respondents' total sexual activity over the last year. Use of condoms was low. Females were more likely to be married, and to have married younger than males.

Most respondents' answers to questions about their attitudes and practices regarding sex and intravenous drug use indicated that they were at high risk of infection and had negative attitudes towards PLHIV, and even towards each other.

Although the females were younger and less-educated than the males, their knowledge, attitude and practice regarding safe sex tended to be better. However, these differences

were not statistically significant, partly owing to the relatively small number of female respondents.

Males and IVDUs had significantly higher scores for knowledge, attitude and practice regarding IV drug use than females and non-IVDUs. Remarkably, the IVDUs' KAP scores were statistically significantly higher than those of the non-IVDUs, which may be explained by two factors: respondent bias, where respondents answered questions in the briefest or easiest way possible or in ways calculated to satisfy the researcher, and the fact that respondents were in the rehabilitation phase, when they are not allowed to talk about negative experiences to avoid inducing thoughts of relapse, as Step 1 of the NA 12-step substance abuse recovery programme prescribes. Therefore they might have answered in the most idealised manner possible, which did not truly reflect their actual KAP regarding intravenous drug use.

Older respondents and those with a university education and above scored significantly higher on knowledge about sexual practice than those who were younger and those with below-university education.

5.7.1. Prediction

Female substance users and female IVDUs were statistically predicted to have a higher score for attitude to sexual practice than male substance users and non-IVDUs.

Those aged over 20 were statistically predicted and also tended to have significantly better knowledge of sexual practice than younger respondents.

5.7.2. Consensus views

The *substance users* reported high-risk behaviour was associated with their age, sex, education and intravenous drug use. They agreed that the most influential method of avoiding infection with BBVs/STIs was peer outreach and education for active substance users. Other methods such as proper sex education through the media, compassionate religious discourse in mosques and churches, and sex education for families and school and university students were enumerated.

The *policymakers* agreed with the substance users' perspectives and added another: there is a need for more and more widely-available rehabilitation programmes and harm-reduction and VCCT centres, and for the upgrading of healthcare facilities including the proper training of medical personnel. They stressed the need for the sound integrated referral of active substance users recruited via the peer outreach programme to

detoxification centres and rehabilitation programmes, where they can be introduced to transformational awareness-raising sex education and BBV/STI prevention working primarily on changing their attitudes and not just providing knowledge. Religious leaders should be involved in harm-reduction services, but should first be trained in proper sex education and compassionate religious discourse to help with the transformation of the substance users' attitudes and behaviour. Lastly, more rehabilitation programmes should be provided for MARPs.

6. The influence of stigma, gender and religion on substance use, safe sex and access to healthcare services

6.1. Introduction

This chapter examines perceptions, impressions and findings from the focus group discussions and in-depth interviews with regard to the themes of gender, religion and stigma. It explores substance user and opinion makers' responses to questions about substance use and BBVs/STIs. It presents the initial codes, followed by the focused codes and finally the three main axial codes (substance use, sexuality, BBVs/STIs). I explore the similarities and discrepancies between the substance users' and policymakers' responses. The results are discussed in relation to my overall aim and objectives and suggested strategies for the prevention of BBV/STI transmission. The topics were similar in both the FGDs and the IDIs. There was a high level of agreement between the substance users and the policy-makers; this could be because three of the eleven policymakers were previous substance users who had graduated from rehabilitation programmes themselves, and thus understood the mindset of active substance users. Some of the high level of agreement could also be due to substance users telling me what they thought I wanted to hear, seeing me as a part of the 'establishment'. Finally, combining the results of the qualitative and quantitative research in an informal triangulation, I discuss aspects of the prevention of the spread of BBVs/STIs.

6.2. Initial analysis of the transcripts

6.2.1. Pilot study: topics and responses

My supervisors set me some topics in the discussion guide to pilot with three rehabilitation graduates in individual in-depth interviews in order to get a grasp of the responses and themes that I could expect in the main qualitative studies to follow. The responses, according to their topics, are presented below.

A rehabilitation graduate substance user felt superior to non-substance users. He had worked towards self-reform and insight for a long time via the NA 12-step substance abuse recovery programme and had managed to deal with the stigmatisation to a large extent. However, the other two rehabilitation graduates who had been rehabilitated and recovered via means other than the NA 12-step substance abuse recovery programme felt

their families' and others' stigmatisation strongly, even though this was often hidden in jokes. One graduate stated that society's prejudice about HIV infection is more intense than that about substance use, and prejudice regarding HCV and HBV infection is much less intense still.

Looking at recovery and reducing the stigma, the three rehabilitation graduates noted a dramatic change in enacted stigma from family and society; they were afforded respect and admiration on their recovery. However, enacted stigma from neighbours objecting to the rehabilitating substance users living in the flats next to their family homes compelled the substance users and their supervisors to move from place to place.

There was also a marked stigma in relation to gender and marriage. The two Muslim rehabilitation graduates refused to marry even recovered female substance users due to their undisciplined sexual history, but the Christian substance user wished that he had married a female rehabilitation graduate. Despite his wife's innocence and constant support since he had been on drugs, he considered that he might have had more in common with a female rehabilitation graduate, even taking into account her probable sexual history. The two Muslim rehabilitation graduates disapproved of marriage between rehabilitating substance users, feeling that either or both might slide and pull the other down, whereas the Christian participant did not believe that all such marriages fail. One of the interviewees approved of rehabilitation graduates marrying non-substance users, and another approved with reservations, anticipating that a wife's hidden enacted prejudice about him might surface at any time. The third participant did not approve of such mixed marriages at all, even when it was the woman who was the rehabilitation graduate and her husband the non-substance user.

6.2.2. Focus group discussions and in-depth interview results pertaining to substance use

6.2.2.1. Gender differences

Substance users' accounts: when asked about the pattern of their substance use, all the female IVDUs said that their male partners had taught them how to inject intravenously and had helped them to do so. Their perspectives on the signs of substance use, however, were different in the male and female substance users. From the perspective of all the female IVDUs, allowing oneself to show signs of substance use is related to living in a male-dominated society. A male substance user, they asserted, suffers less from showing signs of drug use. A relapsed female IVDU reported that her substance use was a disease that she had no control over. She said that as women are more sensitive to social pressure,

using drugs was seen as a normal and expected reaction by female substance users to gender-intensified prejudice from family and society. For instance, this female IVDU deliberately used to prepare drugs and inject herself in front of her family in the hall of their home, in defiance of the extra stigmatisation directed at her as a female substance user.

The substance-user FCSWs claimed that substance use patterns do not differ greatly between men and women. Some FCSWs claimed that drugs make cigarettes and coffee more appetizing. Similarly a male substance-user PLHIV mentioned that drugs made his tea taste better. The substance users' culture led both males and females to believe that it is bad luck to buy drugs before buying syringes, because if they cannot find a syringe to inject with the substance is wasted. So most of the substance users bought syringes first and looked for the injectable substance later.

Gendered masculine practices also influence drug-taking and recovery. *Substance users' accounts*: some of the male substance users' interpretations of masculinity made them behave in certain ways in order to fit into society better, e.g. by exhibiting courageous behaviour when facing rehabilitation and relapse, as a way to assert their masculine role. One substance-user PLHIV argued in the FGD that dysfunctional families in which the father does not give his son enough love and attention end up with a son 'behaving like a girl'. He took drugs to bolster his masculine identity to make up for perceived emotional deprivation and timidity:

When I stopped taking drugs [friends] used to tell me 'You've become like a girl!' – but I want to keep a pocket knife on me and run and chase. When I quit [drugs] I become like a girl. I am such a shy person. I need to drink 'water' [alcohol] and take drugs [to be brave]; it is some weakness in the human being that only drugs can make up for. (FGD, male substance-user PLHIV)

Policymakers' accounts: the policymakers concurred with the substance users' accounts. A female psychiatrist, head of a pioneer drug rehabilitation programme's abused women recovery project, said that it is the toughness and courage that make up the typical masculine image of manliness that substance users strive for, in contrast to the classic 'sissy' image of gay substance users. Heterosexual substance users often exhibit even more stigmatisation and disgust towards gay substance users, who have a perceived softer personality, than the general population would show. Fatalism and masculinity are also linked, she explained: when she asked the FCSWs in her project whether their clients used condoms they replied that Egyptian men erroneously think themselves immune to

BBVs/STIs, as God protects them. Hence they do not care about taking such precautions, while the FCSWs' foreign clients do.

The analysis also revealed that these data about masculinity show that in Egypt it is often constructed from a religious perspective, as reliance on God. Even if something bad happens, it was decided by God before the creation of the universe and nobody can prevent it. This finding concurs with my theoretical analysis of fatalism as an influence in healthcare decision-making (see sections 3.3.1 and 3.3.2 in the literature review).

As for recovery, most female IVDUs complained that female substance users are more likely to be marginalised, isolated and violated, and less likely than male substance users to be assisted by both their family and wider society. This has a negative impact on their recovery. They claimed that some families lock up their substance-user daughters in a room with drugs or treatment until they are substance-free and then try to place them in any kind of marriage to cover up their shame.

The policymakers agreed with the female IVDUs' views of the gender difference. A female psychiatrist argued that most families prefer to secure treatment for substance-user sons rather than substance-user daughters. In her words, this is due to the more intense enacted stigma against females, which their families are keen to escape by ultimately getting rid of their substance-user daughters by sending them for treatment in a remote place or hiding them within a marriage. It is also due to seeing the son as the centre of the family, as he is expected to provide for them. She said that Middle Eastern society forgives the sins of its males but not of its females, and links substance use with loose and undisciplined sexual behaviour for which it has no tolerance, especially in females. She explained:

Families say: 'We'd better get rid of [the female substance user] and wash away her disgrace. 'Once a sinner, always a sinner.' So if she indulges in sex under the influence of drugs her disgrace will not be washed away except by bloodshed. If her folks were a bit nicer they would just throw her out on the street, saying: 'May God compensate us [for losing her].' She will never marry, and her reputation is ruined, her father will not raise his eyes in public. (IDI, female psychiatrist)

6.2.2.2. Stigma, substance use and gender

The previous section has shown how the men and women's experiences of substance use, rehabilitation and social attitudes differed. This section focuses more directly on stigma with regard to gender differences. Substance users' enacted stigma and their responses are discussed in detail. Felt stigma, or felt prejudice, is a feeling that cannot be quantified. The participant substance users and policymakers used the words 'higher' and 'stronger'

for more intense and harsher stigma such as HIV-related stigma, and ‘lesser’ and ‘weaker’ for less intense or generally milder stigma such as drug-related stigma. These exact words allow the reader to understand the degrees of suffering related to the stigmatisation that they are subjected to, often with fatal consequences. These terms about the relative severity of stigma are also used by Egyptians speaking Arabic and are understandable and widespread.

It is worth pointing out the difference between the terminology used by policymakers and that of substance users. I use the word ‘stigma’ (*wasma*) when quoting policymakers and in the analytical voice, whereas the substance users rarely used this word, which is mainly a social-science concept not often used in ordinary conversation. The substance users used the word *tahamol* (prejudice). The policymakers, who generally came from a higher educational background, used the word *wasma* (stigma), differentiating between *dakheleyya* (internalised) and *kharegeyya* (enacted) stigma. Many of the substance users were not familiar with this terminology.

To make a clear differentiation between the participants’ accounts and the analytical voice this section first reports the comments of the substance users and policymakers and then their analysis.

Substance users’ accounts: Although most informants said that HIV infection is stigmatised more than intravenous drug use, there was a divergent case. A female IVDU claimed that as a girl, prejudice against her substance use is actually greater than prejudice against HIV infection. This was contrary to most other substance users and policymakers’ opinions on this issue. She maintained that although HIV is generally linked to sex, society can believe that a girl may have contracted the infection by other means, e.g. via a blood transfusion. This would allow for prejudice regarding HIV/AIDS being less intense than that concerning substance use, which she said was ‘her own fault’. However, this opinion was met with astonishment, disagreement and argument from her fellow IVDUs in their FGD.

Policymakers’ accounts: the policymakers agreed with the female substance users’ opinions about the stigmatisation and discrimination (S&D) that they experienced, as expressed in the larger FGD. The consensus was that male substance users stigmatise female substance users, often making their recovery weak, slow and unsteady. A female psychiatrist agreed, adding that male substance users stigmatise female substance users as if the disease is more acceptable in men than in women. Even the male rehabilitation graduate substance users, with their presumed insight, still view their own disease as

forgivable, while the same disease in women is not. The psychiatrist claimed that a male rehabilitation graduate will cut off his relationship with any female substance user, even if he loves her, to prove to himself that he has recovered, justifying this by saying that it is safer for him and his future children. The psychiatrist, however, felt that it would be even better for female substance users to marry outside the group of male substance users because an outsider, not knowing the nature of their previous life, would not stigmatise them.

The analysis showed that a male non-substance-using outsider would stigmatise female substance users more than male substance users and would lack the sympathy for female substance users that most substance users of both sexes usually show. The common language that male and female substance users develop during their substance use and rehabilitation (and perhaps their relapse) is different from non-user language. The male substance users, in spite of knowing all the scandal and gossip about the female substance users in this small circle, still longed for the company and mindset of female rehabilitation graduate substance users. This shows that the psychiatrist's opinion that it is better for female substance users to marry non-substance-user men to avoid stigmatisation, is unrealistic.

6.2.2.3. Variations in stigmatisation with different types of substance use

Stigmatisation differed according to the type of substance user.

Substance users' accounts: female IVDUs said that different subcategories of substance users stigmatise each other. They contended that substance users' stigmatisation of IVDUs is the highest, even higher than that of society at large, regardless of the IVDUs' high or low socioeconomic status. One IVDU of high socioeconomic status complained that people were repelled when they found out that she was a substance user, and especially an IVDU. She spoke of how she and other substance users compared themselves with one another, and that other types of substance user try to prove that they have higher status because they are not IVDUs 'of her sort'. She said that substance users stigmatise each other on the grounds of their proximity to their drug dealers or for being of urban or rural origin. Substance users boasted about and compared such things as whether they were stealing from their families rather than from unrelated people, thereby not risking exposure or prosecution. This female IVDU complained that society also stigmatises IVDUs who are trying to use harm-reduction services or to buy clean syringes from pharmacies, which is not helpful.

Substance users complained of a 'lack of integrity' on the part of most police officers; that is, their unfairness and ignorance about substance use and HIV/AIDS. This was discussed in the literature review and I return to it in more detail in sections 6.3 and 6.4 on the findings about sexuality and BBVs/STIs.

Policymakers' accounts: the policymakers agreed with the participants' views about prejudice and stigma. The male physician who was the head of the NGO serving PLHIV added examples of different types of stigma: some IVDUs stigmatise sniffing substance users, and vice versa; rich substance users on expensive drugs stigmatise poor substance users on cheaper drugs; alcoholics stigmatise drug users and heterosexual substance users stigmatise gay substance users. He said that male substance users generally do not avoid female substance-user FCSWs, as they often have sex with them.

My analysis found that the substance users considered a drug 'wasted' most if it was inhaled, less if sniffed, less still if swallowed, and not wasted at all if injected. A sniffer stigmatises an IVDU for being poor because he or she cannot afford to waste the substance and resorts to injecting and sharing the limited amount of the substance they have with other IVDUs. Injection is messy and painful, requires special equipment, leaves marks and scars on the arms, hands and legs and carries the risk of infection with BBVs/STIs, lethal overdose and the amputation of a limb due to poor injection practice. This makes it off-putting to some substance users.

The male psychiatrist who was head of an NGO's outreach sector for active substance users mentioned that there are obstacles to preventing the spread of BBVs/STIs because of society's misconceptions about IVDUs. He said that substance users' 'internalised stigma' is due to their hatred of themselves, low self-esteem and feeling that they do not deserve to live a healthy life, and sometimes to their family and society's resentment of them or their own despair due to fear of getting sick and inevitably dying from complications such as an overdose or HIV infection. He added that these may all be factors in most substance users' lack of care about protecting themselves from BBVs/STIs.

Another perspective on stigma was provided by a rehabilitation graduate who was an attorney-at-law and the legal advisor for a pioneer drug rehabilitation programme. He explained that the perspective of both family and society is that an active substance user is not a 'patient' but a 'criminal', i.e. a substance user is a careless person who does not take responsibility for him or herself, cannot even provide his or her own home and steals, assaults people and even kills. He explained that families are unaware of the

stigmatisation that they impose on their substance-using relatives. Even if a substance user maintains a strong recovery for a long time, enacted stigma still haunts him or her.

The female psychiatrist described additional aspects of stigma. First, the higher socioeconomic status of substance users may prevent some enacted stigma at the beginning, but once substance use has continued for a longer period they all end up on the street together, as reported earlier regarding a high-class female IVDU's opinion expressed in her FGD. Second, enacted stigmatisation among female substance users often takes the form of accusing one another of being prostitutes. Third, stigmatisation causes a feeling of inferiority, with substance users who are PLHIV seen as worse and more dangerous than all other people. The psychiatrist mentioned a case of stigma enacted by a family:

I recall a man whose son is a substance user. Once during a discussion he said 'If the substance users' prevalence is 2% of society, why don't we sacrifice them, so the rest of society can live? I really wish my son would die as a martyr and not as a substance user; I'd like to send him to fight for the Palestinian case and die with honour. It would also give me relief [from coping with him and his substance use], but I know my son is a bad person. He would go and make friends with the Israeli Mossad [intelligence] against the Palestinians. I wish we could exile [substance users] somewhere so we could be relieved of their disgrace and problems'. (IDI, female psychiatrist)

An imam trained by the UNDP in curbing HIV/AIDS through changes to religious discourse mentioned in his IDI that the compassionate attitude of many religious leaders seems to help substance users greatly by mitigating some of the enacted stigma, which, he said, is a 'time bomb'. He felt that this compassionate support prevents substance users from taking revenge on society, as he claimed that an HIV-seropositive FCSW could infect thousands of men over six to twelve months in retaliation for being infected.

The analysis revealed that the substance users internalised stigmatisation, calling themselves 'addicts' compared to non-substance-users, whom they called 'normal'. There were also some contradictions: most substance users saw themselves as inferior to the rest of society even though they had successfully completed the NA 12-step substance abuse recovery programme, which they said had made them more compassionate and better-integrated individuals. They realised that they had a different mindset to that of other non-substance-users, who encouraged them to replace the term 'normal people' with 'people who have not experienced substance use'. However, a few rehabilitation graduates were extremely confident and felt superior to non-substance-users.

Policymakers' accounts: the policymakers had a similar perspective. A female supervisor of rehabilitating female substance users mentioned that substance users still use the term 'normal' rather than 'does not have a problem with drugs', although in rehabilitation they are encouraged to use the latter and similar non-stigmatising phrases.

Families found it hard to trust their children who were on drugs. Sometimes their trust never returned, especially after multiple relapses. The substance users called their history of substance use a 'scar' on their records. The rehabilitation graduate and attorney-at-law explained that rehabilitation graduates are under permanent threat: if they make even the slightest mistake in any aspect of their life their family or society will suspect them of having slipped back into their past behaviour. He complained that Middle Eastern societies remind a rehabilitation graduate of his substance use even after 30 years of recovery. Paradoxically, he believed that other people's reassurances that rehabilitated substance users suffer no permanent 'scar' almost confirms society's tough enacted stigma and are instead simply individual expressions of sympathy, encouragement or courtesy.

In Egypt's traditional conservative culture there have been some recent changes in understanding regarding the societal stigma attached to substance use, due to increased awareness of HIV/AIDS via the media. A few female IVDUs stressed that more people living with HIV/AIDS are now able to marry and live a normal life because society has become more aware of HIV transmission routes. They mentioned the significance of the film *Love in Taba* (1992), which has erroneously shaped people's knowledge of and attitude towards HIV/AIDS.

Policymakers' accounts: the policymakers agreed with the IVDUs' accounts as follows: the substance-user rehabilitation graduate who heads the outreach sector of a pioneer drug rehabilitation programme said that he felt that society's perspective on substance users has changed for the better. Society has become more tolerant, with substance users appearing lately on TV and at conferences, relating their experiences of substance use and recovery.

A female psychiatrist seconded this, relating it to increasing acceptance of the substance user as a 'patient' rather than a 'criminal', as mentioned earlier:

The stigma has decreased greatly due to the rehabilitation graduates themselves. Now there is this concept of 'rehabilitation graduates' in Egyptian society across all classes, part of which is due to the great pioneering efforts made by certain rehabilitation programmes in the media, the healthcare system and academia. The

concept of 'disease' has been promoted to replace the concept of 'criminality'. (IDI, female psychiatrist)

The male consultant psychiatrist and head of a pioneer drug rehabilitation programme confirmed that the stigmatisation of substance users has decreased considerably over the past years, while that of PLHIV has intensified.

6.2.3. Substance use: complications and coping strategies

The Muslim imam working with substance users emphasised the concept of 'awareness [via sex education] as a crucial tool' in the process of accepting their status, without which substance users cannot tolerate living with substance-use complications such as contracting HIV.

Substance users' interpretation of their substance use, the potential complications such as having HIV/AIDS and their reactions to God and fatalism were described by a male consultant psychiatrist. He said that as part of their coping strategy some substance users blame themselves for getting infected, some feel angry with God, others accept it as their fate and surrender to God, and still others accept it regardless of the reason and do not think much about it. The substance users' accounts agreed with this.

6.2.3.1. Marriage between substance users and non-substance users, and the attendant stigma

Substance users' accounts: some substance users considered that marriage to a non-substance-user would have a better chance of success than marrying a substance user because of the added stability, regardless of the prejudice. Others believed that success would be greater with a partner speaking the same language, i.e. a rehabilitation graduate, to avoid hatred. For instance, female IVDUs agreed on the difficulty of being married because, they claimed, a regular Egyptian man would stigmatise them and not forgive them for their past even if he had lived abroad and was more sophisticated than most. He would always wonder how she had sold herself and what 'unimaginable' things she had done. Even some male rehabilitation graduates might be uncomfortable marrying female rehabilitation graduates for the same and other reasons, such as attending NA/AA group meetings and sharing their experiences with other male rehabilitation graduate supervisors who might have had relationships with them.

There was consensus among the FCSWs about their distorted image of men. The substance-user FCSWs had differing views on culture, gender, sex and the meaning of love. They all agreed that a typical Egyptian man would not marry a girl with whom he

had already had sex even if he loved her. One told a story about her brother, who had had affairs with six women in Cairo simultaneously but chose an innocent girl from the countryside to marry. Another regretted that even if a Middle Eastern man loved a girl and had had premarital romantic sex with her and found her loyal to him he would still not marry her, unable to break the deep-rooted cultural fixation that any girl who allows herself to be kissed must be loose, thus stigmatising her. FCSWs agreed that in Egypt they found getting married a huge problem, as Egyptian men are, in their words, ‘retarded’ in their ways of thinking, even if they are highly educated, including about sex, and cultured. They wondered how a man with such an intellectual mindset would still inquire about ‘why’ and ‘how’ a woman had done this or that.

Policymakers’ accounts: the policymakers offered diverging responses to this issue. The female psychiatrist said that gender and religious aspects play a big role in substance users’ marriages with regard to both themselves and non-substance users. She illustrated the difficulties for married female substance users: they often marry male rehabilitation graduates, substance-user rehabilitation supervisors, or someone else who understands their background. A few non-substance-user men are willing to marry female rehabilitation graduates, overcoming society’s enacted stigma; however, they go through some turmoil before being able to do this.

Analysis of the data showed that the psychiatrist’s account was unusual and contradicted most of the substance users’ and policymakers’ accounts. Her opinion that female substance users would be more successful marrying non-substance-user men appears to be divergent. It would be atypical of the average non-substance-using Middle Eastern man to behave in such a fashion when considering marriage, largely because of the enacted stigmatisation and discrimination involved.

An active imam involved with substance users in Alexandria stated that he had started a service in his mosque to encourage the families of daughters who are not substance users to accept their marriage to male rehabilitation graduates, thus abolishing the stigma attached to substance users. The imam guarantees the maintenance of their recovery, explaining how substance use is a disease. He stresses the significance of the rehabilitation graduate having a wife and children by his side to help him to lead a stable, balanced lifestyle and take control of his life once more.

The analysis showed that with Egyptian society so conservative and religion-bound, most families have great respect for their religious leaders, finding them highly credible, and would probably give a rehabilitation graduate a chance in such a marriage. However, it is

hard to understand how the imam can guarantee the sustainability of rehabilitation graduates' recovery.

6.2.3.2. Families reintegrating substance users into society to avoid stigma

Some families were in denial about or misunderstood the nature of substance use as a 'chronic disease' in the hope that they could abolish the stigma in this way. The male rehabilitation graduate who was head of an NGO's outreach sector for substance users argued that families long to normalise their rehabilitation-graduate children and reintegrate them into society, turning over a new leaf in their lives. By disregarding their ongoing rehabilitation and recovery working with the NA 12-step substance abuse recovery programme under the supervision of an NA supervisor, the families disrupt their daughters' and sons' ongoing help and professional guidance or deprive them of it altogether. The NA fellow is the person most capable of helping graduates, especially during the early stages when this fresh and fragile recovery can be under the most pressure and they are at their most vulnerability.

The female psychiatrist emphasised the vital role of families as a leading factor in the recovery of substance users. Since families are influenced by the 'culture of shame' and are shamed themselves by society's stigmatisation of their substance-using children. She stressed the need to activate and raise families' awareness of their role as, as she put it, a 'mighty army' that is crucial to recovery. Abolishing societal stigmatisation after recovery depends on the rehabilitation graduates' small community, their upbringing, and society's awareness of HIV as a potential complication of substance use.

In this section I have presented the substance users' responses in their FGDs and those of the experts, emphasising the agreement and disagreement in each group and between different groups of substance users, particularly the substance users and the policymakers. Both seem to agree on most issues. The analysis of these responses was intentionally presented in separate paragraphs.

6.2.4. Gender differences, intravenous drug use and sexual behaviour

6.2.4.1. Knowledge, attitude and practice regarding intravenous drug use and sexual behaviour, in relation to gender

In this section I analyse the quantitative and qualitative data and show how they complement each other. In the next table I compare the knowledge, attitudes and practices regarding intravenous drug injection and sexual behaviour regarding gender.

	Male	Female	Mann-Whitney Test
			P-value
Knowledge (IVDU)	0.000	0.000	<0.001*
Attitude (IVDU)	2.000	0.000	<0.001*
Practice (IVDU)	2.000	0.000	<0.001*
Knowledge (Sexual practice)	69.00	75.000	0.522
Attitude (Sexual practice)	57.00	60.000	0.783
Practice (Sexual practice)	2.000	4.000	0.248

Table 6.1: Gender and median KAP scores regarding IV drug use and sexual practice

Table 6.1 shows that females scored significantly lower than males on knowledge attitude and practice regarding intravenous drug use. However, no significant differences were found between males' and females' KAP scores regarding sexual practice, although some of the women's scores were slightly higher than the men's.

6.2.4.2. Gender differences regarding notifying a partner about BBV/STI infection

Substance users' accounts: the female IVDUs expressed their distrust of Egyptian men. They saw them as liars who would never notify their partners if they were HIV-seropositive. One claimed that most women would tell their husband, as they 'fear God' more, but infected men would not tell their wives. Another disagreed, saying that men refrain from disclosing their HIV seropositivity because of the stigmatisation they feel in Middle Eastern society and not due to personal dishonesty.

Reluctance to notify their partners was similar among the substance-user MSM and substance-user FCSWs. Both subgroups had a strong debate in their FGDs about whether they would tell their partners, end the relationship discreetly or use condoms without

notifying the uninfected partner while continuing in the relationship. FCSWs reported knowing HIV-seropositive FCSWs who continued as sex workers without protection and without notifying their clients, claiming that it was their ‘personal choice’ not to reveal their serostatus.

Male substance-user PLHIV mentioned that their healthy wives had had different reactions to learning that their husbands had HIV, including acceptance and going on with the marriage, maintaining confidentiality; asking for a divorce; leaving the house and openly shaming their husband; and abusing his confidentiality by telling his family, neighbours, friends and colleagues. One male PLHIV reported that half an hour after his Egyptian wife learned that he was HIV-seropositive she shamed him by revealing it to their entire neighbourhood. For the sake of his pride he left the house and separated from her. Another PLHIV, mentioned earlier, told how his foreign wife had insisted on upholding their marriage and sticking by him.

The substance users’ and experts’ accounts both emphasised the importance of partner notification, as it protects society from BBVs/STIs. Disclosure of HIV seropositivity to a sexual partner in a long-term intimate relationship such as a spouse can protect her or him from infection and prevent vertical transmission from mother to baby via pregnancy, delivery and breastfeeding. A partner can also encourage the infected person to use VCCT and treatment services to reduce the viral load of BBVs in their body, rendering them less vulnerable to complications.

Policymakers’ accounts: the policymakers added responses pertaining to the construction of gender and masculinity playing a role in disclosure, as reported below. However their views about a PLHIV notifying his or her partner varied. Some agreed with the female IVDUs’ assessment; the female psychiatrist stated that the Middle-Eastern male might feel awkward about disclosing weakness or vulnerability, as shown by the male rehabilitation graduate who disclosed in a pilot IDI that when his fiancée learnt of his HCV infection she left him after a four-year engagement. He was very bitter about this. A male psychotherapist, head of an MSM and PLHIV project in a drug rehabilitation programme, said that while Middle Eastern men do not reveal their infection to their wives for fear of affecting their tough masculine image, wives are culturally compelled to reveal that they are HIV-seropositive, risking being shamed by society. Since HIV is linked to sex, the first assumption of others is that they have been indulging in loose and undisciplined behaviour, and so infected women risk being called ‘prostitutes’, beaten, divorced, abused and even killed to maintain the honour of the family or the husband.

The psychotherapist elaborated further: if there is no therapist or peer to help the HIV-seropositive substance user to understand the consequences of not notifying her or his partner and to accompany them on that journey, disclosure is difficult. He reported however that several male substance users were not as embarrassed about notifying their permanent sex partners as they would be notifying irregular partners:

The Middle Eastern man may see revealing his seropositivity to his wife as an insult to all men, as if sickness [HIV/AIDS] is weakness. He is hard to convince otherwise. Wives are afraid to notify their husbands that they've got HIV for fear that they might beat them up, shame or divorce them. (IDI, male psychotherapist)

6.3. Analysis of results pertaining to sexuality

6.3.1. Ideas about how the gender and sexual identity of gay men develops

Substance-user MSM had an intense debate about the development of their sexual identity. Some related it to social and psychological pressures, e.g. habituation, loss of support, bad friends and loss of the tolerant guidance of compassionate parents. Others disagreed, arguing that their sexual identity as MSM appeared late in life and not as a result of such pressures. Most argued that they were indeed exposed to pressures, but that these had not pushed them to have sex with men. A few claimed no responsibility and blamed God for creating them like this, while some felt that it was their choice and were happy with it. One said:

Your sexual identity doesn't necessarily evolve when you're young; it may come when you're in your 30s or 40s. We've all passed through this, the psychological pressure, and it isn't a cause: if you don't like what you do you'll never do it! (FGD, substance-user MSM)

One of his MSM peers confirmed this and stated that while most of them had been abused sexually they had chosen this path from preference, as many boys are abused and do not become MSM. A few disagreed with both, claiming that being a gay man is a disease sent from God. One elaborated:

What I know is that God didn't create us this way. However this appeared on earth, like any other 'disease', I feel it's a test from God: everyone has two ways to go: good and bad, light and darkness, and he chooses. (FGD, peer substance-user MSM)

Analysis of the above MSM's message was confusing, as he first said that it is a disease from God, leaning toward fatalism, and then contradicted this, saying that he had become an MSM because there are 'good' and 'bad' and he had made his choice.

A couple of other MSM claimed that being gay men might be due to the wrong upbringing, i.e. a boy raised at home among girls becomes accustomed to behaving like a girl. A few MSM loudly disagreed, stressing that it was caused by an interruption in the development of their sexual identity. In striving to interpret their own sexual identity, some MSM wondered why only they, and not their brothers growing up with them in the same environment, were MSM. One claimed to have discovered that he was a gay man at the late age of 23. He wondered how his brother was heterosexual and married with children while he was not. The MSM group ended up attributing their sexuality to individual variation.

One substance-user MSM shared his view that same-sex attraction is not an issue of God or fate. He claimed that God created men with full masculinity and it is their choice to behave as MSM. A few MSM agreed that they saw themselves as ‘unsound’ or ‘sexually abnormal’ in comparison to heterosexual men, contrary to their belief in their superior sexual behaviour, as mentioned in the next section. They disclosed that their gay relationships involved the same fascination and sentiments as those between a man and a woman.

The analysis revealed that the MSM’s ideas about their sexual identity were contradictory and confused, oscillating between fatalism, predeterminism, personal choice and personal responsibility for their choice.

6.3.1.1. Gay men’s perception of themselves versus heterosexual men

Substance-user MSM confessed that they suffered from low self-esteem. Sometimes they even felt sorry when they saw nice young men who were gay men. One MSM wondered what made those young men choose to have sex with other men. Another said it was ‘such a waste’. I asked them why they referred to heterosexual men and women as ‘normal’ and whether they saw themselves as ‘abnormal’, as mentioned earlier. They replied that because people treated them badly, calling everything that is different about them ‘abnormal’, they felt compelled to use these terms themselves. Controversially, they all agreed that they were superior to heterosexuals when it came to sex, seeing gay sex as superior to straight sex. They claimed that one cannot have sex with a woman before learning how to sleep with a man, and that the MSM’s body is more flexible than the straight man’s.

The data revealed contradictions in the gay men’s accounts of their self-esteem, comparing themselves to heterosexual men.

6.3.2. Sexuality and stigmatisation

6.3.2.1. Sexuality and stigmatisation within families

The substance-user MSM claimed that some families openly stigmatise their gay substance-using sons while others conceal the enacted stigma in public to maintain face. However, most families tolerate their gay son acting in a ‘sissy’ way, but not his gay friends’ ‘sissy’ mannerisms.

Policymakers’ accounts: the policymakers concurred with the participants. For instance, a psychiatrist mentioned the case of a substance user’s mother who was grateful that her son was a substance user rather than an MSM.

6.3.2.2. Sexuality and stigmatisation in society

Substance users’ accounts: a few substance-user MSM argued that most of them only interacted with other MSM on a casual basis or sexually because of the felt stigma, leading to grouping and segregation. One affirmed his gay rights in spite of society’s enacted stigma, saying:

My pleasure is here [in gay sex], and here is what I am looking for. Nobody can hurt me for it, no matter who he is. With all my heart, I find it here – it is out of my hands! I’m not able to say I am gay except here [at the Freedom Programme’s weekly support group]. Would I say this outside? No way! (FGD, substance-user MSM)

The substance-user FCSWs, however, gave different accounts of the stigma during their FGD: they agreed that sexual harassment does not depend on how a woman looks or dresses. One said that cultural norms and the lack of sex education are the reasons that females, even those dressed in conservative attire, are sexually harassed. Simply being out on the streets late attracts stigmatisation as a ‘prostitute’. Sometimes the FCSWs also felt internal stigma, even in the absence of enacted stigma.

Policymakers’ accounts: the policymakers’ responses were similar to those of the participants. The rehabilitation graduate who acted as legal advisor to a drug rehabilitation programme resented the fact that religious leaders disregard MSM and deny their right to live and be accepted, while at the same time they claim to be helping FCSWs and IVDUs. He also blamed this on the Holy Books, which condemn gay sex.

6.3.2.3. Sexuality and stigmatisation in the judiciary system

All the substance-user FCSWs said in their FGD that the police harass them in illegal and immoral ways. One reported that she had witnessed arrested girls being forcibly stripped

naked at police stations so that officers could take photographs and disgrace them by uploading these onto the Internet.

Moreover, one substance-user MSM felt angry when he disclosed how his confidentiality had been breached by his guard during his detention at a police station. When his mother, who had been unaware of his sexuality, visited him to bring him food and money and arrange to hire him a lawyer, the guard disgustingly asked her not to offer him legal help or make any effort on his behalf as her son was a ‘pervert, unworthy and doomed by religion’.

6.3.2.4. Sexuality and stigmatisation in the media

A substance-user MSM complained that the media presents distorted, prejudiced and stigmatising homophobic images of MSM. He resented the ‘cheap’ ‘feminine’ gay figure portrayed in the media, that everybody hates, and recommended that the media should offer a realistic image of MSM and present ‘the problem with its solution’ (i.e. proper data about HIV/AIDS and its prevention and treatment). A peer seconded this and condemned the media for giving wrong information about sex education and BBVs/STIs, including suggesting that HIV can be transmitted through mosquito bites and kissing, thus distorting the scientific facts for the audience.

6.3.2.5. Sexuality and stigmatisation in the substance-user population

A female drug rehabilitation supervisor looking at stigmatisation among subgroups of MARPs mentioned that MARPs stigmatise one another. Each sub-group believes that only they have the right to live, and the others do not. The general societal enacted stigma regarding BBVs/STIs is usually triggered in response to HIV infection but not to HCV or HBV. FCSWs usually display stigmatisation against MSM, although MSM do not stigmatise FCSWs. However, stigmatisation amongst the MARPs themselves generally decreases with frequent contact with one another, for instance at conferences and events.

6.4. Sexuality and the effect of religion

6.4.1. Religious discourse on sexuality in the media

In their FGD I asked substance-user FCSWs which of the religious leaders of different affiliations could best educate them and their families about sex with a compassionate religious discourse. They spoke of a famous strict *Salafi* imam as an example of the preachers whose appearances in public have increased since the Arab Spring.

6.4.2. Thoughts on the Church vs. Islam, and sex expressed during focus group discussions and in-depth interviews

There was obvious competition for religious superiority among the substance-user FCSWs in their FGD. The Christian FCSW tried to prove that she was superior to the Muslim FCSWs by showing off the privileges that she was afforded by the religious leaders at church, which the Muslims lacked. She claimed that Christians get better sex education at church, as she got guidance from her father-confessor, who had replaced her negative father-figure. She even confided in an elderly church stewardess and trusted her to keep her secrets, for instance that she was a sex worker, in case she needed to turn to her in an emergency such as finding herself pregnant. The Coptic Church provides an emergency service to support people who are arrested or contract HIV, for instance. The Muslim substance-user FCSWs approved of what she said, with one adding that the best thing Christians have is ‘confession’.

The policymakers added to this. The male rehabilitation graduate heading the outreach sector of a drug rehabilitation programme mentioned that talking about sex is taboo in Egyptian society and that the word ‘sex’ is perceived as horrendous in the culture and the religion, even though God created sex and gave it to the people to enjoy. Similarly, the head of the first NGO chaired and operated by PLHIV explained that the culture of ‘shame’ is strongly bound up with the religious and social taboo on sex, which completely obscures people’s thinking when they seek to learn about it.

6.4.3. Sexuality and fatalism: passivity before God vs. trust in God

Fatalism is mentioned in the literature review in section 3.3.1.2 and in several other sections of my results; here I discuss it from the perspective of sexuality.

Substance users’ accounts: a few substance-user MSM claimed that they feared God in their own way, and since they felt that their gay sexual practices upset Him, they refrained from them during Ramadan but resumed them at other times. These individuals were ridiculed by the other MSM, who accused them of hypocrisy, saying that he who fears God should fear Him the whole year round and not just during Ramadan. Most of the MSM agreed that they enjoyed gay sex but considered themselves weak and regretted it afterwards. They acknowledged that the extent of their self-control concerning when and with whom they had sex varied considerably from one MSM to another: a reckless MSM

or one on drugs might sleep with a man from his own street or neighbourhood, risking scandal. However, most would not dare to do this.

The link between HIV/AIDS and fatalism was considered controversial in the substance-user FCSW's FGD. The Christian sex worker confessed that if she were to discover that she had contracted HIV she would become more depressed and indulge in more drugs to help her to forget it. When I asked if her hypothetical HIV seropositivity would draw her closer to God, she replied sarcastically that if she wanted to think about God she would have done so earlier; why wait until she got HIV? The Muslim FCSWs totally disapproved of her account and admitted that they would surely become more attached to God and stop what they called their 'sinful deeds'.

An example of the participants' belief in God, spirituality and drugs was encapsulated by a female IVDU who said that reusing even her own syringe might infect her with HCV if this was God's will, even if she had not had HCV before and the needle was clean. She also mentioned her belief that God brought her the drugs she used:

If I got done with an injection and left the syringe with blood inside, then God got me another dose of drugs and I couldn't get another syringe, I'd just get this syringe and wipe it with a handkerchief and water. I wouldn't boil and sterilise it – I have no time. It may be that my blood in it was left to the air for a while [and contracted HCV, which is an airborne virus]. (FGD, female IVDU)

Analysis of the data revealed that the majority of the participants said that they had no control over or hand in being substance users or contracting HIV; they believed that it was their fate. To analyse the latter participant's quote, this attribution of the delivery of her dose of drugs to God is part of Middle Eastern culture; Egyptians tend to add a spiritual perspective to all aspects of life.

The participants' contributions in their FGDs revealed various explanations of the consequences of substance use, e.g. BBV/STI infection. Punishment by God for all the wrongs that a substance user has committed was a frequent topic, as also was the belief that God would send consequences such as HIV to someone for the purification of their soul. Participants felt guilty and blamed themselves for their deeds, and some spent their lives in self-loathing. Some perceived that becoming infected with HIV was God's test of a substance user's faith. Some substance users showed total submission to God's will without enquiring why they had contracted HIV. Depression, rage and anger at God and society and resentment were frequently mentioned. In particular, the thought of other substance users who were doing much worse things but remained uninfected caused anger. Some participants stated that they had grown spiritually with God.

Policymakers' accounts: the policymakers confirmed the substance-user FCSWs' accounts in their IDIs. The female psychiatrist talked of substance users swinging between denial and fatalism, elaborating that they might find using psychological enabling techniques that facilitated their deeper involvement with drugs, sex and their reckless lifestyle soothing. According to her, the fatalism embedded in Egyptian culture offers a false sense of security:

A substance user may tell himself: 'I'm not bad, God will protect me', which deepens the feeling of denial, that nothing bad will happen to him. Many use this excuse to stay on drugs and do not take precautions, knowing that they may get HCV at any time. A substance user who has had an HIV test and finds himself seronegative will go and mess around: fatalism plays a big role in the lives of normal people and this makes people careless about checking whether they have been infected or not, and about how to protect themselves. (IDI, female psychiatrist)

The psychiatrist explained the relationship between fatalism and BBV/STI infection in society by arguing that fatalism is part of the psychological makeup of the Egyptian people, including substance users. A false sense of security rests in the belief that one has been saved by God in the past and He will save one again in the future. The psychiatrist also mentioned PLHIV swaying between rage and resentment towards God, and guilt and surrender to God and fate which influences their willingness or reluctance to seek treatment for HIV/AIDS:

If a substance user gets HIV, he may be reluctant to get treated, as if he is surrendering to fate because he did a lot of wrong in his life, so 'This is it!' The angry type will spend a long time in anger, with the feeling that God is unfair: 'There are many people who are worse than me and have done more than I have and haven't been infected! God has hated me all my life'. (IDI, female psychiatrist)

When I asked the psychiatrist about the probability of PLHIV seeking revenge by deliberately infecting healthy people after discovering their own HIV infection, she argued that the probability was the same as in a normal community, which includes psychopaths just as substance-user and PLHIV communities do. However, she thought that taking revenge was improbable, because if a PLHIV lives in a community that tends toward fatalism he or she might well choose to repent and pay for mistakes made before he or she died.

A few other policymakers added that most people who have started using drugs fairly recently have a negative understanding of God. However, their perception of God changes greatly with recovery, as did that of the male rehabilitation graduate substance user who headed an outreach programme for MARPs as part of a leading rehabilitation programme.

He argued that after substance users are rehabilitated and have become more subjective and balanced, their image of God changes from a retaliatory, unfair God to a loving, caring one. He argued:

When [substance users] recover, the picture changes: they start talking about a loving and caring God who wants the best for them, so real recovery and change make them see their relationship with God from a different perspective, more subjective and balanced. (IDI, male rehabilitation graduate and head of an outreach sector for MARPs)

An imam working in substance users' rehabilitation said that most Muslim substance users know that they chose to turn to substance use and follow the devil, and completely forget about God until they 'hit bottom', at which point they return to God and repent. He said, implying that substance users and PLHIV are not totally responsible for their actions, 'It was the devil that made them sin'.

The analysis reveals that imams play an important role in the lives of Egyptians. For instance, religious leaders ask substance users to protect themselves and society by using clean syringes and condoms if they insist on continuing with their high-risk behaviour, until such time that God touches their hearts and transforms them. Their rationale was that they were not encouraging the substance users' risk behaviour and that it is imperative that they adopt safer sex and injection practices until they recover. However, many such leaders feared that they may be enabling substance users to continue their religiously-unacceptable behaviour.

A male rehabilitation graduate who worked as a legal advisor to a drug rehabilitation programme complained that most religious leaders, both Christian and Muslim, believe that HIV infection is a punishment from God. He felt that the leaders do not reflect the image of God as loving and forgiving. He mentioned that several substance users agreed that the religious leaders are ignorant about their own religion and about sex, and are prejudiced against substance users, wishing they would all burn in hell and finding them unworthy of living:

I mean their ignorance of religion as well: even in religion, if someone commits a sin God is forgiving and merciful! And their ignorance of sex education and scientific education: unfortunately religious leaders in Egypt, on both sides, have a very poor capacity for knowledge and intellectual activity. They do as their fathers and grandfathers did 100 years and 1000 years ago: they don't use their minds, they don't think for themselves, and accordingly all this is reflected in society at large. (IDI, male rehabilitation graduate and attorney-at-law)

Transformation after HIV/AIDS was touched upon by a male psychiatrist and medical director of the outreach sector of an NGO serving substance users and PLHIV, who stated that several substance users were living lives of great spirituality since finding out that they had HIV/AIDS.

6.5. Analysis of results pertaining to living with blood-borne viruses and sexually-transmitted infections

6.5.1. Gender, religion and culture

6.5.1.1. Marriage between couples of different HIV serostatus and stigmatisation

Substance users' accounts: male substance-user PLHIV expressed in their FGD that they felt a great sense of responsibility about not infecting others, although the stigmatisation remained a big issue for them. For instance, they feared that they might infect their wives and railed against the persistent rejection of prejudiced Egyptian families when they approached them asking to marry their uninfected daughters. Even after the PLHIV told them about the strict follow-up regarding their medical condition and the measures they took to avoid passing on HIV (e.g. using condoms and safe sex) most families made various excuses. Their refusal even persisted after their daughters had agreed, though sometimes the opposite happened and the family agreed to the marriage while their daughter did not. Male PLHIV preferred to marry uninfected non-substance-user females rather than rehabilitation graduates because the former would have the stable support of a family and a home, even if the husband were to relapse, as mentioned earlier. One PLHIV with a healthy non-substance-user wife supported this view, claiming that he knew of cases similar to his own. He mentioned that his wife was a foreigner and had insisted on continuing their marriage regardless of the consequences. However, he did not believe that many uninfected Egyptian girls would comfortably risk infection and society's enacted stigmatisation.

A male substance-user PLHIV advocating the desirability of an uninfected wife was faced with fierce disagreement from other members of the FGD. The majority preferred both partners to have HIV/AIDS in order to avoid felt and enacted stigma rather than building a marriage on lies from the start, or risking conflict with the healthy woman's family.

The data analysis revealed that most families have had little education about BBVs/STIs. Although marrying daughters off has become a huge financial burden in Egypt due to the deteriorating economy, political turbulence and the sharp decrease in the number of

eligible males, families still prefer healthy males to PLHIV, even if this means that their daughter will marry late or not at all.

Policymakers' accounts: this was one of the few areas where the policymakers disagreed with the accounts of the majority of the substance users. The experts' opinion was that most male PLHIV substance users prefer to marry infected girls, and that while uninfected Egyptian girls might love and marry PLHIV men against all the odds the opposite rarely happens. In the opinion of the male CEO of an NGO operated by PLHIV, gender, religious and cultural aspects influence the marriage of PLHIV with uninfected partners. He had witnessed the loyalty of educated uninfected girls who intended to marry male PLHIV. He was often consulted by such couples on how to avoid infection and safe practice for delivering uninfected children. However, he mentioned that he never saw uninfected men intending to marry female PLHIV, even if both partners were educated.

6.5.1.2. BBVs/STIs, stigma, culture and media

The media plays a crucial role in breaking taboos. All of the substance-user FCSWs proudly mentioned a professor at Cairo University Medical School who was the first female to appear on Egyptian TV discussing sex education, breaking the taboo. They regretted that her reputation is now stained, as society frowns upon her and wonders how any woman can publicly teach sex education to men, even if she is a doctor and a professor.

A female TV presenter interested in studying and presenting issues of sexuality herself stressed how television perpetuates myths about HIV transmission, portraying it as a plague, for instance through films of the early 1990s. She asserted that it have warped and destroyed the reality of HIV/AIDS with its simplistic, superficial and melodramatic approaches, and that these persistent negative impressions can only be mended by realistic programmes or new films. Television, a powerful tool for transformation that reaches all homes, could change knowledge and attitudes.

6.5.1.3. Reaction to the idea of God's will

Fatalism has already been mentioned in other sections; here I examine it from the perspective of HIV/STI infection. The research participants were all Sunni Muslims or Coptic Orthodox, Protestant or Catholic Christians. As discussed earlier, fatalism plays much more of a part in Islam than in Christianity; however, some Egyptian Christians are fatalistic since both religions have been practiced in the same culture for more than 1,400 years. Substance users blame their losses and failures on God and fate in order to clear

their conscience and give themselves peace. It allows them to feel that they are better believers.

Substance users' accounts: there was a consensus among most male substance-user PLHIV that God had given them HIV. One said that they should thank God for it and not object. Another agreed that it was a gift from God to force him to sin less so that he would go to heaven, because God loved him. These views are similar to accounts mentioned earlier.

Policymakers' accounts: the policymakers agreed with the participants' accounts and a few mentioned further factors: the female TV presenter observed that substance users sometimes perceive HIV infection as a test of faith from God, in line with the substance users' own accounts. This belief is common among Muslims and Christians and is expressed in colloquial proverbs such as '*Whoever believes in God should always be tried by mishaps*'. The presenter resented this idea of HIV as God's punishment as it creates a warped image of a loving God and directs PLHIV towards dry religious rituals rather than true spirituality.

A male psychologist and head of an MSM and PLHIV project reported that PLHIV had discrepant reactions towards God and were fatalistic about their HIV infection, in line with the substance users' accounts: some see God as the sole determinant of their fate and the troubles they are in, while others hold themselves responsible for their deeds and eventually see that God has nothing to do with it. Still others resent the substance users who enticed them into this condition, and some rage against God. The psychologist recalled an example of an active substance user seeing God as his 'persecutor' and the cause of all his tragedies:

First, active substance users mostly see God as their persecutor or the one who chose this sorrowful fate for them. Many will tell you: 'If God wanted to heal me I would be healed'; 'If God wanted me to quit drugs he would not have allowed me into it in the first place'; 'This is not in my control – it is my fate'. (IDI, male psychologist)

6.5.2. HIV-related stigma

Stigmatisation is also mentioned in the other sections regarding substance use and sexuality; here I discuss it specifically in relation to HIV/AIDS.

6.5.2.1. HIV-related stigma within families

Substance users' accounts: in their FGD the male substance-user PLHIV had mixed opinions about how their families treated them. Most claimed that their families'

sympathy minimised much of the enacted stigma for their PLHIV sons. Families became more compassionate and tolerant as they knew that their sons might not have long to live. One PLHIV stated that he thanked God that his family and friends' attitudes toward him had changed little when told about his infection. A few substance-user PLHIV, however, had a different perspective. They said that even though their families were considerate they still felt the difference. One maintained that while his family's concern for him had increased, he still felt their enacted stigma regardless of how well they treated him. A second agreed, resentfully adding that his family made him constantly aware that he would soon die, and a third confirmed that he felt stigmatised precisely by the way they treated him differently – better – than his fellow PLHIV:

They accept me because I'm their son and I'm going to die. They know I will die in 3 to 15 years with or without medication, but they might not accept my [PLHIV] friend. That is still stigmatisation of me! (FGD, male substance-user PLHIV)

A male substance-user PLHIV claimed that the lack of sex education in Egyptian households is the cause of this enacted stigma, due to improper handling by the media and the narrow-minded Middle Eastern culture. Although he repeatedly informed his family of the ways in which HIV can be transmitted and prevented with no risk of infection via casual daily contact, they still stigmatised him. Another agreed, complaining bitterly of his family's ignorance and enacted stigma, which was based on false information derived from a 1992 film, as mentioned earlier:

I see the stigmatisation in their eyes daily. They may treat you in a ridiculous manner, sterilising your cup and spoon. Here in Egypt they are unimaginably ignorant! (FGD, male substance-user PLHIV)

However, another PLHIV disagreed with what his peers said and justified his own family's stigmatisation of him due to their fear of other family members contracting the infection and their dread of a scandal. Another tackled a further aspect of the stigma: HIV transmission routes account a great deal of stigmatisation at home. He claimed that the stigmatisation is lower in the case of HIV infection through IV drug injection, higher with HIV contracted through commercial sex, and much higher if acquired through gay sex, as mentioned earlier.

The substance-user MSM had a different reaction: they complained of their families abandoning them after discovering that they had contracted HIV through gay sex.

Policymakers' accounts: the policymakers concurred with the substance users' accounts and elaborated further. The female psychiatrist reported that enacted stigma on the part

of the parents of substance-user children is sometimes linked to fatalism. Families will help to treat their children for substance use but not for HIV/AIDS, as if they feel that HIV is God's punishment for the greater sins of their children and they should not interfere.

6.5.2.2. HIV-related stigmatisation by medical care providers, including doctors

One male substance-user PLHIV said that doctors will breach the confidentiality of a PLHIV husband by notifying his wife and telling her to divorce him, rather than encouraging the husband to notify her or try to sort things out himself. The felt stigma prohibits PLHIV from using health and sex education facilities, leading to the increasing incidence and prevalence of BBVs/STIs mentioned earlier.

6.5.2.3. HIV-related stigmatisation in civil society organisations

Medical care providers stigmatise substance users highly, especially MARPs, as the male CEO of the PLHIV-led NGO stated:

Nobody wants to work in gay sex except a single NGO here in Alexandria [not his NGO]. Still, that NGO is a scandal; its staff don't realise they're working with MSM! They curse and call [the MSM] names. At a conference for World AIDS Day the head of that NGO shouted: '[MSM] must be caught and burned alive!' (IDI, male CEO of NGO serving PLHIV)

6.5.2.4. HIV-related stigmatisation among substance users

In the FGDs participants mentioned that male substance users' enacted stigmatisation of female substance users is greater if the females are infected with HIV or HCV. This decreases their chances of marrying healthy male rehabilitation graduates in spite of their common language and experience.

The policymakers concurred with the participants' accounts and added more. The male psychologist argued that PLHIV support groups include individuals who have contracted HIV through substance use, others who were infected through gay or heterosexual sex, and some who acquired it from blood transfusions and other causes. Each of these categories internalises the enacted societal stigma and subsequently stigmatises the others; e.g. those who have contracted HIV through a blood transfusion stigmatise those infected through heterosexual sex, assuming loose undisciplined behaviour. These, in turn, stigmatise substance users, who stigmatise MSM. Although all the categories have HIV in common and they all need support to cope with it, they still scrutinise the infection route in order to categorise and stigmatise each other. The psychologist has had to divide

his support groups into two, one for HIV-seropositive MSM and another for those infected by other causes.

6.5.2.5. HIV-related stigmatisation within wider society

In the domain of substance use and HIV/AIDS the stigma is enacted across the three intersecting circles of substance use, sexuality and BBV/STI infection, as described by the male CEO of the NGO serving PLHIV.

6.5.2.6. Legal harassment and violation of the human rights of people living with HIV

Various violations of the human rights of PLHIV have been mentioned. Here I report some examples of such violation through enacted stigma.

Substance users' accounts: some male substance-user PLHIV claimed that the police often exaggerate the nature of the crimes they are charged with, e.g. escalating 'using drugs' to 'trading drugs', and urge the judge to give them a higher sentence. In the case of trading drugs the location of the sale is significant: for instance, dealing in drugs in schools increases the severity of the verdict. One PLHIV complained of violation of his human rights by the judge himself. He said that the judge considered making HIV/AIDS tantamount to the crime of adultery, which is punishable by imprisonment. When the judge asked him if he had HIV his Human Rights Watch lawyer objected to the question, asking the judge to prove from the legal literature that there is a crime called 'sick with HIV/AIDS', and in retaliation the judge gave the lawyer a year's detention for contempt of court.

PLHIV reported the humiliation they had suffered in jails, for instance being made to sleep on the floor for six months or cuffed to their beds twenty-three hours a day, even in front of their children. They felt very bitter about it. They had to repeatedly beg the guards to allow them go to the toilet until finally Human Rights Watch persuaded the authorities to provide them with a separate ward in a fever hospital in Cairo, where they stayed for a while before being transferred to prison. The consensus in the PLHIV FGD was that all PLHIV, whatever the crime, are always imprisoned together, locked up and isolated in one ward and not allowed to mingle with other inmates. They complained that this is against the law on confinement, which stresses keeping inmates together according to the severity of their crimes. They had been astonished to find themselves locked up with vicious inmates accused of first-degree murder, for instance, simply because they all were PLHIV.

Policymakers' accounts: the policymakers concurred with the PLHIV's accounts. A male human rights activist defended the rights of MSM and PLHIV and elaborated on the strange system for penalising and executing verdicts involving convicted substance users. He found it bizarre that the Egyptian parliament had, without explanation, raised sentences considerably to satisfy public opinion. When the resulting sentence is extremely high the judge can be reluctant to execute it and hesitates, giving the lawyer an opportunity to decry the verdict.

6.5.2.7. Legal harassment and violation of human rights in the workplace

One male substance-user PLHIV complained bitterly of enacted stigma and persecution from some employers on discovering that an employee has HIV/AIDS. For instance, it suddenly might be decided in a company that employees must submit to a blood test, and employees found to have HCV – not even HIV – may be fired and publicly shamed.

6.6. Best strategies for preventing the transmission of blood-borne viruses and sexually-transmitted infections

Substance users' accounts: the female IVDUs listed some prevention techniques that they thought would work best in the Egyptian culture: using the media to present serious educational campaigns showing successful examples of rehabilitation graduates, particularly PLHIV, with their families, leading a normal life; developing centres caring for maternal and child health; raising awareness about sex in schools and universities; promoting the role of the family more than that of schools; encouraging more compassionate and non-stigmatising religious discourse; and holding sex-education training courses for MOH, NGO and drug rehabilitation programme personnel.

Policymakers' accounts: the policymakers concurred with these suggestions and added some more. A male consultant psychiatrist mentioned that perfect strategies for preventing the spread of BBV/STI infection would include crucial outreach programmes for MARPs through peer education, and referring more active substance users contacted via outreach to rehabilitation programmes. He argued that substance use is spreading rapidly, making it impossible to keep up with outreach and refer enough substance users to the rehabilitation programmes. This hinders the spread of MARP rehabilitation programmes, especially for the unqualified, illiterate and less articulate lower socioeconomic classes, and hinders the expansion of effective harm-reduction services. He also recommended the introduction of opioid substitution programmes in drug detoxification centres and harm reduction programmes in prisons, police stations and

locations where substance users and MARPs congregate to practice high-risk IVDU. Since the media is expected to play a highly effective role in minimising enacted stigma, legal action should be taken against media outlets expressing S&D, to give hope to substance users. He stressed that the media's role is far greater than only showing methods of virus transmission and quitting drugs. In addition, religious leaders should play a significant role in supporting the efforts of outreach services; a change in their ideology is highly desirable to guarantee the consistency of outreach programmes. Training courses are needed to transform the attitudes of rehabilitation graduate substance users, stakeholder personnel such as healthcare professionals, NGO volunteers, human rights activists, police officers and media professionals through different philosophy and policy. Most importantly, sex education must not be an alternative to peer outreach and education, as substance users might not bother to learn about sex on their own but might benefit from it within rehabilitation centres. He claimed that sex education for the benefit of substance users is reaching fewer than 10% of the active substance users on the streets. Sex education could be introduced into drug rehabilitation programmes through a common management scheme, with partnerships and referrals among different branches. The Ministry of Education could be persuaded to add special sex education lessons for adolescents, especially after preparatory school, at 14 to 15 years of age. VCCT centres should be comprehensive and integrated, e.g. including HIV and HCV testing; the psychiatrist pointed out that some studies prove that the minimum prevalence of HCV among substance users is around 60–70%. MARPs coming through the outreach sector should not be referred to discrete VCCT centres: VCCT services should be introduced to them by their outreach sectors, so as not to lose track of them.

6.6.1. Using peer-to-peer outreach and education to reduce stigmatisation

Substance users' accounts: there was general agreement among substance-user MSM on the effectiveness of peer-to-peer education in outreach programmes. This was seen as the best method of preventing the spread of BBVs/STIs, because peers have credibility in substance users' eyes and can deliver messages about quitting drugs and harm reduction. Similarly, most of the male substance-user PLHIV working in the outreach sector ('peers') reported that peers are successful in reaching and informing MARPs and PLHIV about VCCT and harm-reduction centre services. The trust they have earned allows active substance users to believe in peers' word of mouth.

Policymakers' accounts: the policymakers agreed with the substance users' accounts and seconded the view that peer-to-peer outreach and education for active substance users is the most influential method for protecting substance users from BBV/STI infection.

6.6.2. Using the media to reduce the stigma

In their FGD most of the substance-user MSM recommended sex education in schools and universities, because they considered young people the most important group to protect. One complained that the media shows prejudiced, homophobic and distorted images of MSM. He resented the 'cheap' and 'classically feminine' gay figure presented by the media, whom everybody hates, and recommended that the media portray a realistic, representative image of MSM. Another MSM seconded this and condemned the media for giving wrong data about sex and BBVs/STIs, including about the spread of HIV through kissing, obscuring the scientific facts for audiences.

6.6.3. Using compassionate religious discourse to reduce stigma

One substance-user MSM particularly hoped for a separation of religion and the state in the Egyptian constitution, as in Turkey, where the state is secular. Striving to fit into society, he hoped that religious discourse would become tolerant enough to frankly discuss lesbian and gay as well as straight sex. A peer stressed the influential role of the mosque and the church, which always gather more people at their own events than gather at any other event.

6.6.4. Reducing the stigma in harm reduction services

6.6.4.1. VCCT and drop-in centres and obstacles to their use

Substance users' accounts: when asked if they were satisfied with VCCT services the female IVDUs said they were not, because of the enacted stigma on the part of the care providers; the surrounding environment, such as the neighbours; and fear of their confidentiality being breached. They stated that not many substance users know about VCCTs and the centres are underused, as is the AIDS Hotline.

The substance-user FCSWs agreed that VCCT services are insufficient, ineffective and few and far between. The MSM confirmed that these services are neither widespread nor influential, and believed that their enacted stigmatisation of substance users and MARPs acts as an obstacle to their use of these services. Male substance-user PLHIV, however, were more appreciative of the VCCT and harm reduction services.

The male substance-user PLHIV recalled having objected many times to the heads of NAP about stigmatisation and prejudice of their medical personnel, who repeatedly ignored their complaints, threatening to reduce their monthly dose of ARVs if they complained or talked to the UN or the media, and them. The following account sheds light on how NAP personnel need to be more professional in the manner in which they deal with PLHIV. A debate took place in the PLHIV FGD about whether VCCT centres are beneficial or not. One complained about NAP:

I was psychologically hurt. The [counsellor] should get some training in how to deal with someone whose [HIV test] result is positive. The man takes you aside to test you as if he's vaccinating you! In front of all the people, and the door is wide open: he doesn't talk to you privately, he doesn't explain what AIDS is, unlike in [NGO] offices. I didn't realise how bad he was until I saw other VCCT centres where they are aware. (FGD, male substance-user PLHIV)

Policymakers' accounts: the policymakers concurred with the FGD participants' accounts and also complained of insufficient and inadequate VCCT services. They complained of MOH VCCT centres offering no pre-counselling and weak post-counselling for HIV testing, and of non-medical personnel meeting the client and performing the HIV test with no privacy. They lamented the blunt delivery of bad news and inadequate referral to support groups to help the person concerned to cope.

The male CEO of the PLHIV NGO argued that NAP's VCCT centres do not address their medical personnel's highly-stigmatising attitudes towards MARPs, and that substance users are reluctant to use other NGOs' VCCT centres because they are usually hidden in residential buildings and the neighbours stigmatise them. He attributed the enacted stigma to myths in the Egyptian culture such as thinking that giving away condoms encourages vice in the form of illegal sex, and giving away clean syringes propagates the injection of illegal drugs.

The female therapist for female substance users lamented the limitations to the effectiveness of these services. Some of these limitations are due to fear of the police; for instance substance users taking condoms and syringes from the harm reduction centre keep them concealed due to stigmatisation by the police, particularly of females. If the police suspect and stop a female substance user they may arrest her and charge her with prostitution simply because she is carrying condoms, and the same applies to male substance users caught with syringes from the harm reduction centres, who can be charged with 'drug intake'.

6.6.5. Barriers to sex education

Substance-user FCSWs voiced different opinions about religious, intellectual and cultural barriers to proper sex education in their FGD. One expressed this as ‘cultural terrorism’: intolerance of any unorthodox life choices such as gay sex, commercial sex, or substance use. Other barriers include Egyptian men’s negative attitudes towards women and to sex in general, and families’ belief in the taboos and myths surrounding sex, which prevent them learning the facts. Below are some examples of obstacles to proper sex education in Egypt.

6.6.5.1. Taboos at home

A male rehabilitation graduate expert who headed the MARPs outreach sector of a drug rehabilitation programme reported on children’s ignorance about sex due to the cultural taboo. Their questions embarrass their parents, who often ignore them.

Another male psychiatrist who headed an NGO’s MARPs outreach sector elaborated that there is some sex education in Egypt, but at a very superficial and general level. Knowledge is mixed up in the strong traditional culture of taboos, not to mention the stigma, which is another major obstacle. Family knowledge is also intermingled with myths about fatalism which prevent any real change in attitude or behaviour. The psychiatrist quoted substance users saying ‘God will protect me; nothing [bad] has happened up to now, so it’s not going to happen’.

6.6.5.2. Obstacles to proper sex education imposed by religious leaders

Substance users’ accounts: substance-user MSM agreed that religious leaders’ arrogance and pressure violates their and gay PLHIV rights. However, they argued that some leaders’ condemning attitudes and behaviour had changed dramatically after attending a conference with MARPs on HIV prevention for a few days. A substance-user MSM reported how the religious leaders’ opinion changed totally after a few sessions with MSM, becoming more humane and sympathetic:

At a conference the religious leaders were so hostile. In the next session when we sat down all together and I told them my story, an imam gently gave me his business card, saying ‘I don’t approve of what you do but when you talked about the suffering you are going through my attitude changed. I did not think [MSM] suffered that much! I was unfair and always thought ‘Those people insist on making God angry’.
(FGD, substance-user MSM)

Policymakers’ accounts: the policymakers’ views were in line with the participants’ accounts. The rehabilitation graduate who was a legal advisor to a drug rehabilitation

programme pointed out that the enacted stigmatisation of substance users by religious leaders is an obstacle to proper sex education, as mentioned. The imam who worked with the substance users thought that imams graduating from the Islamic Al Azhar University were qualified to handle all kinds of BBV/STI prevention methods and sex education.

6.6.5.3. Obstacles to proper sex education at schools and universities

Substance users' accounts: a few substance-user MSM also suggested that hindrances to sex education could include the generally poor level of education in schools and universities and the intolerance of the stigmatising Middle Eastern culture, which accepts only heterosexuality. They recommended including a sex education curriculum in the school syllabus. The Ministry of Education should understand the urgency of providing children with proper sex education before they resort to illegal channels and misleading information.

The analysis showed how those with a university degree and above generally score well on knowledge of safer sex, so it is understandable that a poor level of education impedes proper knowledge and awareness of sex. In support of this, most of the little-educated substance users in the FGDs had a negative attitude toward PLHIV.

Policymakers' accounts: the policymakers seconded the substance users' proposals and emphasised how sex education varies across schools. In the international schools owned by foreign embassies it is taught freely, while in Egyptian-language schools and state schools there is little or none. The female TV presenter interested in sexuality explained that the introduction of sex education in the foreign schools is alleged to have resulted in several illegal pregnancies and cases of BBV/STI infection. On the other hand, there is still only one class on the male and female genital systems in national preparatory schools, and this is usually cancelled, skipped or skimmed through quickly as both teachers and pupils feel embarrassed. Many families keep their children out of school on the day it is to be taught.

6.6.5.4. Resistance to sex education and 'the conspiracy from the West'

The substance-user FCSWs discussed their belief that HIV/AIDS was originally introduced to Egypt when somebody had sex with a foreign woman, because the disease had originated abroad in the Christian world, far from the Islamic world.

The policymakers confirmed that there is a conspiracy theory about sex education and the West that Egyptians strongly believe. In his IDI the male CEO of the NGO run by PLHIV described the general aspects of this 'devastating' conspiracy theory. He explained that

since the West is widely perceived to be against Arab social and cultural norms, any good intentions are always interpreted as bad, and a hidden agenda is always suspected in anything coming from the West. He claimed that this causes Egyptians to believe that although foreign aid is beneficial to Egypt there is always evil hidden behind it. He linked this to the fact that Egypt has been colonised for long periods of time by different invaders from different cultures, and the population retains notions of conspiracy. He recited a painful experience that he and his team had had while offering a sex education class to parents of children at a primary school in Alexandria:

Once we went crazy and held committees for sex education in schools. We thought of inviting the board of trustees and running a training course for them with the title 'Sex education: between right and wrong'. The parents shouted: 'You are [Christian] Americans! You are Jews! You are coming here to spread [illegal pre-marital] sexual relationships!' (IDI, male CEO of NGO serving PLHIV)

The CEO recalled how the most tolerant father of them all agreed to take the course, but only on the condition that the CEO would train him, and then he would train his daughter in return.

6.7. Chapter summary

In summary, analysis of the participants' accounts found that sub-themes such as stigma, gender and religion have a strong influence on substance use, sexual behaviour and access to healthcare.

Egypt's Middle Eastern, conservative, male-dominated and predominantly Muslim society imposes harsh S&D on everything connected with drugs and sex, including substance users, MARPs and PLHIV, and particularly females. The high enacted stigmatisation meted out by this society, including its healthcare personnel, is internalised by its high-risk populations, especially the females. This inhibits them from stepping forward in the face of that society to claim their rights to use healthcare facility services for diagnosis, rehabilitation and treatment, and to marry, have children and work. The MARPs feel the internal stigma as a response to society's enacted stigma, and in turn stigmatise each other: FCSWs stigmatise MSM, and male substance users stigmatise female substance users. There is a hierarchy of stigmatisation, with heterosexual substance users stigmatising gay substance users and refusing to join them in activities. HIV-related stigmatisation is harsher than the drugs-related stigma, and the stigma related to gay sex is more intense than that enacted towards commercial sex workers. Finally, stigmatisation causes many substance users, MARPs and PLHIV to suffer strongly from

public shaming, desertion, seclusion, imprisonment and unemployment, which often lead to poverty, fatal illness and death. The stigma is very problematic for female substance users wishing to marry, compelling most substance users and PLHIV to marry others in the same circumstances. The media potentiates the S&D of substance users, MARPs and PLHIV by portraying negatives images of these groups.

Gender influences the age of the sexual debut, which is lower for men than for women, as well as the pattern of substance use, with men injecting intravenously more than women and assisting female IVDUs with their first few injections. There is a relationship between drugs and commercial sex: the FCSWs take drugs before and during commercial sex to dissociate themselves, while most MSM do not take drugs, preferring to be more alert to enjoy the sex. Rehabilitation and recovery is harder for female than for male substance users due to the harsher stigmatisation and discrimination against them. Medical advice-seeking behaviour for the rehabilitation of substance-users and BBV/STI infection management found most women shying away from boldly claiming their rights as the men do. Most men would not notify their female sex partners of their HIV serostatus, but demand that their women notify them if they find that they are HIV-seropositive, often resulting in the women being banished. The stigmatisation of drug use, commercial sex and HIV is more intense for women than for the men in all the categories. Healthy women are more ready to commit to PLHIV men as a serodiscordant couple than vice versa. The female FCSWs deprecated and distrusted Egyptian men, and most had a distorted father image.

Religion plays a pivotal role in Egyptian society as a whole, as also in the lives of both the Muslim and Christian participants in this research. Most participants believed in fatalism and did not hold themselves responsible for being substance users or gay men, for selling sex, or for their infection with BBVs/STIs. Highly-esteemed religious leaders displaying a positive attitude and a merciful religious discourse can dramatically affect substance users', MARPs' and PLHIV's self-confidence, empowering them to lead a decent life by helping them to positively adjust their image of God. This enables more successful and sustained rehabilitation and recovery, easier access to healthcare facilities, and marriage to non-substance users. There is an association between fatalism, passivity, and masculinity, with male Egyptian substance users believing that they are immune to infection with BBVs/STIs. Some imams try to take on the role of Christian father-confessors in their effort to reform substance users. MARPs fear God even while continuing their 'sinful' behaviour; e.g. MSM reported refraining from gay sex during

Ramadan, and FCSWs preferred the strict Muslim *Salafi* televangelists to other religious leaders delivering religious discourses.

7. Discussion

This chapter begins with a brief overview of the main quantitative and qualitative findings, followed by their contribution to previous knowledge in this area of study, considering the population I worked with and the sample chosen. This is followed by a comparison of the study's findings on high-risk practices such as unsafe sex, unsafe substance use and, unsafe injection with the findings of other studies in Egypt, MENA and globally. I then discuss the study's findings on the social influences of gender, religion and stigma on high-risk behaviours. Finally, I discuss the strengths and limitations of my research, summarise the thesis and make some policy recommendations.

I discuss the results of this study in relation to the most relevant and recent research that demonstrates both the advantages and the limitations of mixed-method studies. Studies linking substance use, sexuality and BBVs/STIs with sex education, stigma, gender and religion have been conducted in Islamic countries other than Egypt in the Arab world. This study's literature review relies largely on the Anglo-American secular literature, because in ultraconservative Middle Eastern Egyptian society even discussing any of these subjects is still largely frowned upon. If one adds the intense social stigma and discrimination against Egypt's substance users, most significantly MARPs, it is clear how extensively this has negatively influenced the amount of research conducted on these marginalised and underserved populations. They are usually overlooked when dispensing appropriate health and sex education and promoting efficient use of health services. I include examples of studies conducted in non-Arab Islamic countries in the MENA region, such as Pakistan and Iran. In addition, studies in SSA countries such as Kenya, Uganda, Tanzania and Ethiopia are included because they are similar to Egypt in their stage of socioeconomic development. They are religious cultures, much like Egypt; some mainly Muslim, (Tanzania, Nigeria and Senegal) and some mainly Christian (Uganda, Kenya, Ethiopia and South Africa), with similar social and cultural norms.

7.1. Overview of the main findings

Most of the respondents in the KAP survey and qualitative studies showed moderate knowledge of HCV and HBV but little knowledge of HIV and its association with sex and IV drug use. Their high-risk attitudes and behaviour tended to be associated with age, sex, education and intravenous drug use. They agreed that the most influential technique for preventing the spread of BBVs/STIs among active substance users is via peer outreach

and education. Other preventive methods such as the media publication of appropriate sex education, compassionate religious discourse in mosques and churches and sex education for families, at school and at university were enumerated. The policymakers largely agreed with the substance users' assessments and added other points: the need for more rehabilitation programmes, harm reduction and VCCT centres, and for upgraded healthcare facilities with proper training for medical personnel. They stressed the need for integrated referral of active substance users contacted by rehabilitation graduate peers via the outreach programmes to drug detoxification centres and rehabilitation programmes. Attitude-transforming and awareness-raising training on sex education and preventing the spread of BBVs/STIs were discussed, as well as rehabilitation programmes for MARPs. They felt that religious leaders can be very effective and should be involved in harm-reduction services, but must be properly trained in appropriate sex education and compassionate religious discourse.

There was a marked variation in knowledge, attitudes and practices with regard to sex and drugs among the substance-user respondents. Condom use was generally found to be low. The women were more likely to be married, and at a younger age than the men. Most respondents' accounts of their risky sex and risky intravenous drug attitudes and practices indicated that they were at high risk of infection. Most had a negative attitude towards PLHIV and even towards other substance users, especially those in MARP subcategories other than their own. Although the females were generally younger and less educated than the males, they tended to reveal better knowledge, attitudes and practice regarding safe sex. This is statistically insignificant owing to their small number in the sample due to the heavier stigma against them which inhibits women from coming forth. Men and IVDUs of both sexes had significantly higher scores for KAP regarding intravenous drug use than women and non-IVDUs of both sexes. Furthermore, respondents with university bachelor degrees and postgraduate education scored significantly higher on knowledge about sexual practice than those with below-university education. Those aged over 20 also tended, and were predicted statistically, to have significantly more knowledge about sexual practice than younger respondents. Similarly, female substance users and IVDUs of both sexes, as predicted statistically, scored higher than male substance users and non-IVDUs of both sexes on attitude to sexual practice.

The individual interviews and focus group discussions provided a rich description of the participants' experiences of stigma and discrimination, and their views on the influences of gender and religion on high risk practices, which are discussed below.

7.2. Original contribution to knowledge

This research is original among other studies conducted in Egypt and the Middle East that also cover the stigmatised and neglected population of substance users in Egypt and especially the women, who generally avoid exposing themselves to other people because of the intense S&D to which they are subjected. To my knowledge, no such research has been conducted using mixed methods before or with such a large number of substance users, including the overlapping and hard-to-reach subcategories of MARPs – MSM, FCSWs and IVDUs, and especially those also infected with HIV. The relatively large number of FGDs and IDIs held with substance users and policymakers is unprecedented, as is the diversity of the participating policymakers' professional, educational, cultural and political backgrounds. The research location was a pioneer drug rehabilitation programme in MENA whose executive director, with his expert input, acted as an external supervisor of the research. Being given the chance by the executive director to conduct this research in such a conservative and religious Middle Eastern, male-dominated and predominantly Muslim society, with its deep-rooted taboo on everything related to drugs and sex, provided access to the substance users while securing a supportive environment in which they could express themselves. No previous study has sought to identify the most appropriate techniques for preventing the spread of BBVs/STIs with such a population in this particular cultural environment. Two major themes arose from the data: the pivotal influence and potential effects of religion in this mainly-Muslim society, and the potent negative effect of gender in this male-dominated society. A third theme, stigmatisation and its devastating effect on the participants' lives, also emerged from the data. The study is also original in linking BBV/STI infection, substance use and sexuality.

The rest of the chapter considers the originality of my study in relation to what is known from previous research.

7.3. Respondents' characteristics

In this section I review my results with regard to the participants' age, education and urban or rural place of residence, and then compare these with related findings in Egypt, MENA region and other countries.

The substance-user participants were mostly young urban adult males with a university education or higher, and are therefore not representative of all substance users in Egypt. Their average age was 29 within a range of 16 to 53. This wide age range may have

affected the overall results of the sample because the older respondents' KAP regarding sexual experience is probably different from that of the younger respondents.

Most respondents lived in the city, although more than half of the Egyptian population live in the countryside (CIA Egypt Factbook, 2013). This may be because most of the rehabilitation centres are in urban areas and the families of rural substance users find it difficult to send their children so far away for six months for rehabilitation. Females are less likely to move to the urban environment than males, due to the culture.

Participants with a university or postgraduate degree knew more about sexual practice than those with less education, but as noted, their attitudes and practices did not differ significantly from those of respondents with less education. My findings emphasise the need to improve health and sex education: for instance introducing HIV/AIDS awareness programmes in schools and universities is crucial for students' protection from BBV/STI infection.

Higher education in my sample was not found to be associated with intravenous drug use in the KAP survey results. This may be because IV drug injection is not included in the Egyptian education system's health or sex education curricula. Dewing et al. (2006) say that IVDU has become a principal HIV infection route worldwide. After looking at six African countries - Egypt, Tanzania, Kenya, South Africa, Mauritius and Nigeria - the authors recommend including the association between IV drug injection and BBV infection in Egypt's educational curriculum, particularly since IV drug use is increasing rapidly nationwide. This supports my finding that health and sex education should be introduced in schools.

7.4. The nature and frequency of high-risk behaviour

In this section I review the results of my study and compare the findings of my mixed research method with related findings on sexual and drug injection behaviour in Egypt, MENA region and other countries.

7.4.1. Substance use

All of the following studies had something in common with my own sample, context or results and also differed in various ways. Below I discuss these similarities and differences.

7.4.1.1. Substance use and high-risk sexual practices leading to BBV/STI infection

I compare my research to the next five studies in terms of risk behaviour leading to substance use and the threat of BBV/STI infection.

The first two studies worked on MARPs and the relation between their high-risk behaviour and HIV infection and the female participants were few, as in my study. However the studies did not look at other STIs or BBVs, except HIV, were quantitative in nature which represent a gap in the literature using mixed-method research in Egypt, worked only with substance users and did not involve policymakers. Egypt's MOH-NAP Biological and Behavioural Surveillance Surveys (BBSS) (2006a, 2010) used a questionnaire to gather information on behaviour and practices concerned with HIV/AIDS and STIs among a sample of MARPs, including MSM, FCSWs and IVDUs.

The results of these two studies match mine, associating high-risk sexual and drug injection behaviour and low educational level with HBV and HCV infection. However, sample size was smaller than my own; they did not test HIV or STIs; and unlike my study they do not include qualitative methods and investigated the general population rather than substance users or policymakers. The studies were also case-controlled while mine took a mixed-method approach. Jimenez et al. (2009a, 2009b) sought to identify the risk factors for HBV transmission in Greater Cairo's two fever hospitals, using a sample of 233 HBV and 94 HCV seropositive cases in a matched case-control study. The study found that HBV and HCV transmission is associated with recent marriage, intravenous drug use, surgical procedures and being shaved at barbershops, and with being illiterate.

Badr et al. (1998) conducted a study among substance users in Alexandria to determine the correlation between substance use and health problems. Their research employed a questionnaire and laboratory testing for HBV seroprevalence. Intravenous drug use and tattooing were found to carry the highest risk of transmission. Badr's study used a much smaller number of substance users and controls than my research which involved a large number of substance users along with policymakers, no controls and a mixed-methods approach. Badr and colleagues' study investigated HBV-related risk behaviours and does not discuss other BBVs/STIs. The similarities are as follows: both studies sampled substance users, many substance users had tattoos, and many had been IVDUs for a long time, with a large number of intravenous injections per day.

Knowledge, attitude and intravenous drug injection practice in relation to HIV infection

My study found that IVDUs had more knowledge about safe injection than non-IVDUs, although their attitude and practice remained considerably risky. Unexpectedly, the quantitative results show that the IVDUs' KAP scores are statistically significantly higher than those of the non-IVDUs, which may be explained by a respondent bias, with respondents tending to answer the questions in a way calculated to please the researcher and finish the questionnaire in the shortest time, or because most of the respondents were recovering in Freedom Programme rehabilitation centres and working through the 12-Step Substance Abuse Recovery Programme and were not allowed to talk about negative substance use-related experiences that might induce flash-backs or relapse. This means that in my study, non-IVDU substance users scored significantly less than IVDUs on KAP regarding safe injection, and appeared to be at higher risk of BBV/STI infection.

The following nine reports and studies include similarities and discrepancies compared to my research. In line with my findings, these studies report a strong correlation between intravenous drug use, unsafe sex and HIV infection and the vulnerability of MARPs. However, they do not all study the three BBVs I looked at and do not all work with substance users or policymakers. They also do not look at substance use, gender, sexuality or BBV/STI infection as my present study does. The studies are either quantitative or qualitative but none used a mixed approach as mine did.

UNAIDS (2012b) reports a study of HIV prevalence among MARPs in Libya which found a prevalence of 87% among IVDUs in Tripoli, one of the areas with the highest prevalence in the world, according to the Libyan BBSS.

The Population Council's Survey on Young People in Egypt (2011) shows that there are serious gaps in knowledge about HIV/AIDS among youth although the majority had heard of HIV/AIDS, with males having heard more about it than females. Most of these young people stated that HIV can be transmitted through sex; one fifth knew that it could happen via shared needles and some believed myths such as that it can be transmitted through insect bites and through hugging, kissing and eating with PLHIV. The survey additionally reports that most respondents had a negative attitude toward PLHIV, although the better-educated among them were not as negative as those with less education. The survey found that most youths had low to moderate knowledge about HIV/AIDS, believed myths, and had a stigmatising attitude to PLHIV which was less

intense among the better-educated, all in line with my results which show that my respondents of higher education knew more about safe sexual behaviour.

The Egyptian NAP-BBSS (2010) sampled 275 IVDUs in Cairo and 285 in Alexandria who engaged in unsafe drug injection and unsafe sex, and found that their spouses were also at risk of contracting BBVs/STIs. This matches my results, which show the vulnerability of IVDUs and their sex partners to BBVs/STIs, high-risk injection practices and sexual behaviour.

El-Sayyed, Kabbash and El-Guniedy (2008a) checked the KAP regarding HIV risks and modes of transmission of a sample of 1256 16–40-year-old Egyptian industrial and tourism workers in Egypt. Both groups had negative attitudes towards PLHIV and their human rights, matching my results. Only 0.4% of respondents knew that condoms can be used to avoid HIV infection, as in my study, where knowledge about BBVs/STIs was also poor. However, the authors worked on a larger sample than mine.

Tavoosi et al. (2004) conducted a survey of negative attitudes towards PLHIV and the significance of sex education in Iran, a Muslim MENA non-Arab country. This study, which found poor knowledge of HIV, is more in line with my study results. It was conducted on 4,641 secondary-school pupils in Tehran and found that only a few answered all the knowledge questions correctly, revealing many myths about modes of HIV transmission. The authors emphasise the importance of initiating sex education in secondary schools. It is similar to my study in that it matches the accounts of my respondents, who stressed the importance of sex education in schools to protect pupils from infection with BBVs/STIs before it is too late. However, Tavoosi and colleagues surveyed a bigger sample.

Refaat et al.'s (2004) survey study of Egyptian university students reports that nicotine, drug and alcohol use and risky sexual behaviour were usually all associated. My research reveals that young people engage in unsafe behaviour with regard to drugs and sex and frequently use substances such as nicotine, alcohol and drugs simultaneously. Refaat and colleagues found that a third of their studied sample had insufficient knowledge about HIV/AIDS and practiced risky sexual behaviour, matching my results. In Refaat's study the university students resorted to their peers for information about sex, as in my own study, whereas substance users only trusted their peers and were highly influenced by them.

An older quantitative study conducted in Egypt by Salama et al. (1998) investigated substance users' KAP regarding HIV risk practices and the effect of health education on

their knowledge and attitudes. The authors report that the majority of substance users had a negative attitude towards PLHIV, matching my results, and stress health education as a successful tool for improving active substance users' knowledge and attitudes about HIV/AIDS. My study confirms this and recommends peer outreach services for reaching active substance users. However, the study investigated a smaller sample than mine, Salama and colleagues found that most male substance users had more knowledge about modes of HIV transmission than female substance users, while I found that females had marginally better knowledge. About a tenth of the IVDUs in Salama et al.'s (ibid) study shared needles, fewer than in my research.

UNAIDS/99-1E (1999) reports that male IVDUs are at greater risk of HIV infection and of transmitting it to others than female IVDUs. Men are more likely to share injection kits than women, increasing the risk of transmission to other IVDUs. In contrast my study found that males and IVDUs of both genders had significantly higher scores for KAP regarding intravenous injection than female substance users and non-IVDUs of both genders, and the KAP scores of my male substance users and IVDUs were statistically significantly higher than those of my non-IVDUs and female substance users.

Hasan, Farag and Elkerdawi (1994) describe a qualitative research conducted with 258 IVDUs in Egypt to map their sexual activities and the prevalence of HIV among them. The results showed low condom use and sexual behaviour with a high risk of HIV infection, jeopardizing their health and that of their partners. My respondents also engaged in risky sexual behaviour, but my study sample was bigger.

The implications of these findings for future policy are discussed later in section 7.9

7.4.2. Sexual behaviour

The majority (94%) of the respondents reported having had their sexual debut. Just under half of those who had had sex were ever married, with the oldest marrying at 38, the youngest at 14, and the average age at marriage 25. Only a quarter of my sample were still married at the time of the survey. More than two thirds were not married at the time of the study, with about half of these reporting that they were sexually active. This is similar to the rest of the population in Egypt, with its rising age of marriage and premarital sex.

Most of the respondents' sexual relationships were heterosexual. Some reported having had their first sexual intercourse at the age of 16 or later, most probably due to the Muslim-dominated Egyptian community in which early marriage is preferred and socially

accepted, especially in the countryside. However 26 respondents, of whom 4 were women and 22 men, had sex with partners of their own gender. Eighteen (4.3% of all respondents) reported having had anal sex during the last year.

Other studies and reports mentioned in the literature review agree and disagree in various ways with my results on unsafe sex, early sexual activity and premarital and extramarital sex and the associated risk of BBV/STI infection, as I discuss below.

First, looking at global studies and reports, Global AIDS Response Progress Reporting (2016) stresses that as part of FCSWs' responsibility toward protecting themselves and their clients they should undergo HIV testing to find out their seropositivity. Knowing one's seropositivity is necessary for proper health-seeking behaviour. Since FCSWs can transmit HIV in multiple ways, namely via frequent sex and multiple, non-regular sex partners, condoms should be used consistently and correctly to significantly lower HIV transmission. WHO (2015b) reports that sex workers include female, male and young people who trade sex for money or goods. Sex workers are at greater risk of infection by HIV/STIs than the general population due to many factors such as multiple sex partners, unsafe sex and the inability to regularly impose condom use on their clients. Both of these studies match my results. FCSWs mentioned in their FGD that they could not negotiate for the use of condoms every time with their male clients for fear of losing them – even in the case of anal sex, knowing its greater risk of infection by BBVs/STIs –. FCSWs also mentioned that they knew other HIV-seropositive FCSWs who did not notify their clients of their seropositivity for fear of losing them and exposure to shaming and harassment. They did not even mind having sex with clients while menstruating, hiding this by putting toilet tissue in their vagina, simulating a tampon, showing that they were not interested in either their own or their clients' welfare.

The Population Reference Bureau (2000) reports that the incidence of early marriage has declined compared to twenty years ago, although the average age at marriage is still low in some regions. It also reports that better-educated women with more education tend to be healthier, marry later and stay healthier than less educated women who are exposed to the hazards of early marriage and early pregnancy and delivery and potentially to BBV/STI infection. This is similar to my findings that most of my female respondents had married early, were less educated and were at great risk of BBV/STI infection in spite of their slightly higher KAP regarding safe sex than that of men. The Global Sex Survey (2005) reports that on average people worldwide first experience the sexual act at the age of 17, matching my substance users' accounts.

My findings on early sexual activity are also in line with those of two studies conducted in non-Arab countries. Negash et al.'s (2004) study in Ethiopia, a mainly Orthodox Christian African country, finds that sexual activity may begin at the age of 11, with an average age of 16 for girls and 18 for boys, in line with my study respondents, many of whom had their sexual debut at 17. The authors state that their respondents, like my own, had adequate knowledge about HIV/AIDS and still engaged in high-risk behaviour. The authors recommend the initiation of sex education in schools, as I do. However, while Negash and colleagues' study was conducted on individuals in the community and substance users, like my respondents, it only looked at HIV/AIDS and not at other BBVs/STIs. It also explored KAP only and did not look at sexuality or substance use as I did, and employed a questionnaire survey and not a mixed-method approach like mine. Senayake (1998) mentions that there has been a trend towards a higher age at marriage in developing countries, but that adolescents practice premarital sex without using contraceptives or taking measures to protect themselves from infection with BBVs/STIs. These results are similar to my own, with my respondents jeopardising their health by exposing themselves to infection with BBVs/STIs via unsafe and premarital sex. Some in my sample had married at the age of 14, which is very young for Egyptians except in rural areas. Almost a third of my respondents were unmarried at the time of the survey and about half were not having sex with anyone, most likely due to divorce or to the strictures of the NA 12-Step Substance Abuse Recovery Programme, during which rehabilitating substance users are advised by their supervisors to refrain from sexual contact and focus on recovery which can take up to a year.

The PRB (2013) reports that in Arab MENA countries 1 in 7 girls marries at under 18 years of age. Their families believe that it is for the girls' good and do not realise the negative effects of early marriage, which include dropping out of school, sexual coercion, early pregnancy, domestic violence and, as the report mentions, a never-ending circle of illiteracy and poor education, poverty, sickness and high fertility. Egypt, with the largest population in the MENA region, also has the largest number of child brides, according to the report, whose findings are similar to my own with the early marriage of some of my respondents resulting in the consequences mentioned above.

Studies based in Egypt include some results that are similar to mine and others that differ. Rashad and Eltigani (2005) point out that substance users tended to make unstable *Urfi* marriages, with many female substance users agreeing to early marriage to escape harsh

family conditions. Some of my respondents had resorted to unstable marriages and the female substance users tended to have married early.

With regard to knowledge, attitude and sexual practice my findings show a positive correlation between age and knowledge of safe sexual practice: the older my participants were the more knowledgeable they were about safe sex. Older respondents scored higher on knowledge about sexual practice and safe sex, although this was not associated with safer attitude and safer practice. Almost two thirds of respondents said that they never used condoms and the rest rarely used them. This put them in danger of contracting BBVs/STIs, especially when having sex under the influence of alcohol or drugs, when they are disinhibited enough to indulge in hasty behaviour and not focus on protecting themselves and others.

Some of the following six studies and reports had a similar context and/or sample to mine. However these six studies/reports did not include policymakers in their sample, and did not link sexuality, substance use and BBV/STI infection. They were either quantitative or qualitative but never a mixed-method study such as mine. They each studied only one category of MARPs but not the three subcategories I worked with. Sometimes the studies/reports studied non-substance user participants.

El-Kak's (2013) results are similar to my own because the author elaborates on further risk factors behind the increase in BBV/STI infection such as volatile temporary marriage, unregulated commercial sex and the absence of resources for sex education. This matches my respondents' acceptance of volatile temporary marriage and unsafe commercial sex, and the absence of adequate and appropriate sex education for them, all of which put them at risk of contracting BBVs/STIs.

A qualitative study conducted in Greater Cairo by Kabbash et al. (2012) found a high risk of HIV infection among 431 FCSWs, of whom about half reported using drugs and about a third, alcohol. Only a third used drugs during commercial sex and only a third had used condoms in the last month, and generally condom use was low. The reasons given for not using condoms included 'not liking it' and the male client's refusal. These findings match my own: my FCSWs took drugs during commercial sex and often failed to negotiate the use of condoms with their clients. However, Kabbash and his colleagues included a bigger sample of FCSWs than my study does. A survey study by Fitaw and Worku (2002) in Ethiopia among medical students reports the same findings as those of Kabbash et al. (ibid) and matches my results regarding unsafe sex, the use of drugs during sex, and low condom use. Their sample was also almost the same size as my quantitative study.

A study by Nada and El Daw (2010) in Egypt shows another reason for early sexual intercourse, that is, sexual abuse, which is becoming a serious problem in Egypt. The authors conducted a qualitative study which revealed that the majority of street children (a subcategory of MARPs) aged 12–17 faced harassment or abuse, including from the police. Street children used drugs and had sex with older adolescents aged 15–17, who reported having multiple sex partners among the other street children and never used condoms. Most of the street girls had experienced sexual abuse. Street children are particularly exposed to these risks, especially when they overlap with other MARP subgroups: if they are also MSM, FCSWs or IVDUs they are at greater risk of contracting BBVs/STIs. Nada-El Daw's results concur with my own findings about MARPs' unsafe sex and unsafe injection practices and their subjection to sexual abuse, as the FCSWs stated in their FGD. However, Nada and El Daw's study's sample size was smaller.

Kabbash and Shokr (2005) state that there are alarming signs of high-risk behaviour in Egypt, with low condom use in the general population and among substance users and MARPs. This matches my findings on condom use and my respondents' high-risk behaviour.

The Egyptian MOH (2005) reports that changes in cultural norms and poor knowledge of modes of BBV/STI transmission have had a strong influence in the escalation of HIV infection. The cultural changes include more liberal sexual attitudes and behaviour among youth, and increased intravenous drug injection. This report matches my respondents' poor knowledge about BBV/STIs and high-risk behaviours, increasing the risk of infection. My respondents said that although Egypt is a Middle Eastern conservative religious community with a taboo about sex and drugs, cultural norms are changing and a sexual revolution is occurring involving widespread premarital and extramarital sex, multiple sexual relationships and men offering commercial sex. MARPs in particular disclosed their high risk practices, such as IVDUs sharing drug injection kit.

In my study and the above cited, knowledge about safe sex was no guarantee of safer attitudes and practice. Analysis of my findings shows that while female substance users, highly educated substance users and substance users over 20 years old had adequate knowledge about safe sex and its relationship to HIV/AIDS, this did not lead to precautionary attitudes or practices. The findings of the following five studies are similar to mine, however, they were not mixed-method studies, did not study policymakers, did not look at all categories of MARPs and did not link substance use, BBV/STI infection and sexuality, like I did.

The UNAIDS (2012a) and the Egyptian Ministry of Health's National AIDS Programme (2011) reports also match my findings of poor knowledge of BBVs/STIs and high-risk sexual behaviour among Egyptians. The reports state that Egyptians generally have little knowledge of BBVs such as HIV. The UNAIDS report highlights MSM's risk behaviour in three governorates due to low condom use on the last occasion they had commercial sex. Previous data found that a quarter of MSM reported having had one or more BBVs/STIs in the three months before the survey. MARPs are highly vulnerable to infection due to their low level of condom use and high rate of BBV/STI infections. These results match my own finding that MARPs practiced unsafe sex.

Ezomoh (2012) conducted a KAP survey among 1600 MSM in Nigeria, a religious sub-Saharan country. The majority showed good knowledge of condom use, but this did not result in safe sexual behaviour. Most of the gay men did not use condoms or use them regularly. The results of this study match my own finding that knowledge of safe sexual practices does not necessarily result in safe or healthy sexual attitudes and practices and that Ezomoh looked at substance users.

El-Zanaty and Way (2009) and WHO (2006) include similarities to my findings that Egyptian youth risk contracting BBVs/STIs due to their high-risk attitude and behaviour. WHO (2008) reports on Egyptian young people's risk of various BBVs/STIs, matching my findings. Young adults are particularly vulnerable as they are found to likely to engage in high-risk sexual behaviour, including sex with multiple partners and unprotected sex, particularly with MARPs such as FCSWs. Another risk factor is the low socioeconomic status of many young people, several of whom neither go to university nor find well-paid work or any work at all which makes working in commercial sex appealing. The DHS (2008) report on Egypt by El-Zanaty and Way (ibid) also emphasises young people's poor knowledge of HIV/AIDS and negative attitudes towards PLHIV, matching my findings, with young people of 15–24, especially young women, knowing even less. This is all similar to my findings of poor knowledge of BBVs/STIs, stigma against PLHIV and high-risk sexual practices.

In my study females and IVDUs were statistically predicted to score higher on attitudes to sexual practice which are in keeping with safer behaviour. Age, gender, education and intravenous drug use were not associated with scores for safe sexual practice. There was no significant difference between male and female participants' KAP scores for sexual practice, which were generally low, and the participants' overall knowledge was not statistically influenced by gender.

However, a study in India by Lal et al. (2000) found that males knew more about safe sexual practice and the risks of contracting HIV and STIs than females. Lal's study was conducted on college students and not on substance users and MARPs like mine, and employed a questionnaire survey while mine took a mixed approach. Mine also looked at sexuality and substance use, which Lal's study did not. Christian students in Lal and colleagues' study had a better attitude to HIV/AIDS and safe sex than non-Christian students, in contrast with studies conducted in SSA, Lebanon and the Gulf, which found that Muslim students had safer sexual practices than non-Muslims.

WHO (2015a) states that in low- and middle-income countries diagnostic tests for STI infection are usually unavailable, and if available they are generally expensive and geographically hard to access. Other hindrances to STI screening and treatment include poor healthcare equipment, untrained healthcare workers, little or no follow-up of sexual partners of infected individuals, and medicine shortages. Stigmatisation is a great obstacle, as in many countries STI services are segregated from other health services, stigmatising those who seek it. These services are frequently unavailable, which cause the substance users and subcategories of MARPs to refrain from using them. This matches my results: FCSWs and MSM complained in their FGDs about the technical inadequacy of healthcare staff and their highly stigmatising attitudes and behaviour, which took many forms, and of the poor availability and inefficiency of the equipment at healthcare institutions. My respondents claimed that substance users who use the screening and treatment services and the substance users around them are the only ones who have heard of its existence.

7.5. Cultural influences on high-risk behaviour

This section presents and compares my results and method with those of other relevant studies conducted in Egypt, MENA and other countries on the subjects of gender, religion and stigma.

7.5.1. Gender

Gender has a significant influence on patterns of knowledge and attitude regarding sexual and substance use practices. In this section I show the association between gender and these practices in relation to the risk of infection by BBVs/STIs.

My research found that female substance users scored higher than male substance users on KAP regarding sexual practice, and male substance users and IVDUs scored higher

regarding drug injection. The men had more sex partners than the women. On average the respondents had had more than two sex partners over the previous twelve months; however as most had spent the year before the research in rehabilitation and this does not represent their usual, higher sexual activity. The male substance users' vulnerability to BBV/STI infection was a matter of concern, especially since my study found that FCSWs had constituted a third of the male respondents' sexual partners in the last year. Although commercial sexual activity is illegal in Egypt's conservative society it is prevalent in the substance-user population. Female substance users demonstrated significantly lower KAP regarding safe substance injection than that of males, suggesting that they are at greater risk of infection by BBVs/STIs.

7.5.1.1. Gender, high-risk practices and vulnerability to BBV/STI infection

Below I compare my own study with others on the themes of gender, high-risk practices and vulnerability to BBV/STI infection. The following reports and studies discuss gender inequality and the different patterns of men and women's drug use, sexual activity and healthcare-seeking behaviour, globally, in the Islamic world, and in Egypt.

- **Globally**

The below ten studies and reports have similarities and dissimilarities with my study as follows. UNODC's (2015) World Drug Report states that female substance users in particular face obstacles to accessing screening and treatment for BBVs/STIs globally; a third of substance users in the world are women, but female substance users represent only a fifth of the substance users that are treated around the world. UNODC cites the UNAIDS (2015) report which finds that more female IVDUs are vulnerable to becoming infected by HIV than male IVDUs. Their high vulnerability is due to several factors such as the intense S&D that female IVDUs face, which make them shy away from exposing themselves and hide their substance-use problem and avoid seeking healthcare. With the scarcity of gender-specific and gender-friendly services female IVDUs do not enjoy the privilege of safe injection support such as needle and syringe exchange programmes provide, and commercial sex is mostly associated with substance use, which is generally unsafe. The two reports above match my qualitative accounts of substance users and policymakers, which found that female substance users, and especially IVDUs, are more stigmatised and discriminated against than male substance users in all settings. Female IVDUs and FCSW substance users complained particularly of the ubiquitous stigma in healthcare settings and the marriage arena. The participants agreed that the substance use

problem is greater than that of male substance users, as are recovery and rehabilitation which is harder and greater than that of males’.

WHO (2015c) reports that adolescents and young people worldwide are unknowingly especially prone to infection by STIs, which has serious effects on their general wellbeing and especially on the fertility of girls and young women. This report matches my study, which found that young people had poor knowledge about proper sex education and risky attitudes and behaviour. Older substance users in my study were statistically found to have better knowledge of safe sexual practice than younger substance users.

Mbonye et al. (2012) point out that in Uganda, gender inequality manifests in the social and economic burdens that women carry in relation to men. The authors investigate factors that might lead women to become sex workers. Neglect on the part of parents at home, domestic violence and police brutality are all enumerated. Some of the women used alcohol and drugs for courage; however, most were unable to negotiate safe sex with their clients, and while they often contemplated leaving sex work, few did. In 2013 Mbonye et al. carried out a qualitative study in Uganda on women who were highly vulnerable to HIV infection. Two thirds were active FCSWs, of whom a third were living with HIV/AIDS. The women had above-primary-level education and took risks when practicing commercial sex and took drugs and alcohol which impaired their judgment, and they often lost the argument about safe sex with their clients. This agrees with the accounts of the FCSW substance users in my study, all of whom took drugs before engaging in commercial sex to dissociate themselves from it, but not before having romantic sex with their boyfriends so that they could enjoy it and feel everything. The same account about drugs and sex was given by the MSM substance users. The FCSWs mentioned several factors that had pushed them into commercial sex, most importantly parental neglect, weak family ties, domestic violence from male family members and the loss of a respected father figure at home. They also said that they frequently failed to impose condom use on their clients for fear of losing them, even for anal sex with its higher risk of transmitting BBVs/STIs, of which they were aware. Mbonye and colleagues discuss how the stigma is a major hindrance to HIV prevention and treatment because of the limited understanding of the staff about their stigmatising attitudes against PLHIV receiving ARVs in healthcare facilities. Mechanisms by which PLHIV avoid such prejudice and hostility include social withdrawal, quitting their job and moving in with their parents if their condition deteriorates.

MacLachlan (2009) conducted a questionnaire survey of 377 women taking part in four HIV/AIDS treatment programmes in Uganda, a predominantly Christian sub-Saharan African country, whose religion-based society resembles that of Egypt, to explore their economic difficulties and how these difficulties influenced their sexual risk behaviour. MacLachlan found that the majority of women reported having used a condom for their most recent sex act. Many women needed to find food and support, which put them at risk of forced and coercive sex. MacLachlan's data match my findings: the female substance users in my study were often so desperate that they submitted to forced risky sex and often did not use condoms with their clients or care to check whether the latter had multiple sex partners, demonstrating risky attitudes and behaviour in relation to BBV/STI infection. Additionally, the Egyptian female substance users avoided using healthcare facilities due to the intense S&D that they experienced there. The Ugandan study differs from mine in that it focuses on non-substance-user women, looks only at HIV and is based on quantitative research.

Pinkham and Malinowska-Sempruch (2008) mention that gender influences substance use, particularly in seeking and using harm-reduction services, because the stigmatisation of female substance users scared them away. My research also found that female substance users avoided seeking healthcare due to discrimination against them by healthcare personnel and male substance users.

Williams et al. (2007) state that women and men use drugs differently. Women usually used drugs before the commercial sex act to psychologically dissociate themselves from their clients, whereas men used drugs to increase their sexual appetite and prolong their erection. This matches the accounts of the FCSWs and the MSM substance users in my study. However, Williams' study sampled Tanzanian non-substance users while mine focuses on the hard-to-reach population of male and female substance users and other subcategories of MARPs along with policymakers.

El Saadawi (2007) reports that the religious culture of Islam affects gender relations and supports the subordinate status of women, agreeing with the many responses in my study about the inequality of male and female substance users.

UNAIDS (2006) reports studies in several countries that, like my own, found that IVDUs frequently did not use condoms during sexual encounters with FCSWs, casual partners and other IVDUs, rendering them and their partners and clients vulnerable to HIV infection.

According to Silvester et al. (2006), the gender imbalance is manifest in the stigmatising and discriminatory attitudes of healthcare staff and the police towards poor and highly vulnerable women, and in particular female PLHIV, obstructing their safe access to healthcare.

Lester et al. (2004) emphasise that healthcare personnel breaching the confidentiality of female substance users prevents their accessing and using care and treatment. This was echoed in the accounts of my participants, where substance users and policymakers approved the societal stigmatisation as it manifested in healthcare personnel and police, which has severe repercussions on the welfare of female substance users and PLHIV, frightening them away from the healthcare they need.

- **In the Islamic world**

DeJong et al. (2005) state that many practices augment women's HIV vulnerability, including the temporary marriages that Islam allows in particular situations and young people's lack of the education they need to protect themselves against BBVs/STIs. The vulnerability to HIV of women and young people matches my results, which found that although women scored higher on KAP regarding sexual practice they were still more vulnerable to BBVs/STIs, and many of the substance users disclosed that they had been in the volatile temporary marriages that carry a risk of contracting BBVs/STIs. My findings also revealed that while the young people had low-moderate knowledge about safe sex and safe drug injection, their attitudes and behaviour were highly risky.

- **In Egypt**

The next ten papers and reports discuss how gender issues and high-risk behaviours make women and youth especially vulnerable to BBV/STI infection. There are some similarities with my study findings, however these studies did not match my study results in various ways, such as: not including policymakers in study samples, not being mixed-method studies, not looking at the three BBVs; not working on the three subcategories of MARPs and not linking substance use, BBV/STI infection and sexuality as my study did.

Egypt-NAP VCCT (2011) found that the women and girls who used NAP's VCCT services were illiterate and of a low socioeconomic class and were thus especially vulnerable to HIV infection. This does not agree with my results, as my female participants, while less educated than the males, had better KAP regarding safe sexual behaviour. I predicted them statistically to score higher on attitude to sexual practice than male substance users.

Egypt-NAP's BBSS (2010) found that despite the lower prevalence of HIV among FCSWs than among IVDUs and MSM, high-risk behaviour resulted in new infections. Among the 200 FCSWs surveyed in Cairo, condom use was found to be rare, even though half of the women were married (and may have risked transmitting infections to their husbands). The women rarely took an HIV test despite the fact that almost a third had STIs, matching the accounts of high-risk behaviour by the FCSWs in my FGDs. The BBSS sample was bigger than mine.

El-Sayyed et al. (2008b) conducted qualitative research on 73 MSM in Cairo, screening them for HIV and studying their risk behaviours. They found that the majority of the men had had their sexual debut before the age of 15. Unexpectedly, the majority of older MSM claimed to have heterosexual relations while the majority of the younger men practiced strictly gay sex. Since their condom use was poor, the younger MSM put themselves at greater risk of contracting HIV. Many of the gay men had sexual relationships with women. In my research, too, the respondents started having sex early, at 17, their condom use was also low and many of the gay male substance users were married. My older substance-user respondents knew more about safe sex than the younger ones.

UNODC (2006) records that in developing countries female substance users are overshadowed by male users and they are more liable to get infected with HIV, than men. My findings also show that male substance users' families are more willing to treat their active substance user sons than they are for their substance user daughters; that female substance users are timid and refrain from seeking healthcare due to the stigmatising attitudes of medical personnel whereas male substance users are not usually exposed to the same S&D; and that men's substance-use disorder is more tolerated and forgiven than women's in Egypt. This is the case even if a male substance user contracts HIV, whereas it is considered disgraceful for a woman to be HIV-seropositive and leads to accusations of commercial sex work. Most men do not disclose their seropositivity to their spouses but demand that their wives disclose theirs; however after such a disclosure wives are harassed, banished, thrown out of the home, abandoned by their family and denied custody of their children. UNODC reports that male IVDUs lead female IVDUs into intravenous drug injection, matching the accounts of the female IVDUs, who related in their FGD that they had been taught to inject the first few times by their boyfriends, sexual partners or fellow male IVDUs until they mastered the manoeuvre themselves.

Monitoring the AIDS Pandemic (2001, 2005a, 2005b) reveals, first, that female IVDUs are particularly vulnerable to HIV infection, as the evidence shows a close relationship

between sexual practice and the intravenous-related risk of HIV. Most IVDUs are sexually active and many engage in sexually risky behaviour that increases their chance of contracting HIV. While this matches my substance users' high-risk drug injection and sexual behaviour, my study found that female substance users had better KAP regarding sexual behaviour than male substance users. Second, there is an association between having sex and IV-injection-related risk of contracting HIV. Most IVDUs are sexually active and practice unsafe sex, raising their risk of contracting HIV. This matches my participants' accounts, whether substance users or policymakers, that sex and drugs coincide, increasing the risk of infection with BBVs/STIs.

Seeley, Grellier and Barnett (2004) report that gender constraints and inequality promote the spread of HIV infection, and that this discrepancy between men and women affects their sexual practices, usually putting the women at higher risk of contracting HIV. The female respondents in my study also ran a higher risk of contracting BBVs/STIs.

Similarly, Aggleton, Chase and Rivers (2004) argue that globally, certain groups of young people are especially prone to HIV just because of their sex, age and social status: young IVDUs, young FCSWs, young MSM and young women are forced to practice sex. Women's low social status may deprive them of control over their sexual relations, putting them in jeopardy of infection at an early age. While men are sometimes culturally expected to be more sexually experienced, which sexual potency is seen to prove, women are expected to postpone satisfying their sex urge until they are married by refraining from extra-marital sex and being naïve about sex to prove their chastity. These results are in line with my own finding that young people, MARPs and women are highly vulnerable to BBV/STI infection. My FCSW respondents mentioned they could not negotiate safe sex with their clients and one said that she had been raped by a client under the influence of drugs. One FCSW mentioned that her brother had had multiple sexual relationships with many women simultaneously, but when he chose to marry he resorted to a girl from the countryside, expecting her to be sexually naïve and pure. He refused to marry any girl he had even kissed, claiming that a girl who allows premarital kissing certainly allows premarital sex.

One study worked only with MSM show that this group is in ongoing danger of HIV worldwide. The World AIDS Campaign (2000) investigated young gay men aged 15–25 who were single, worked as manual labourers or were jobless and were illiterate or had had little education, and found that age significantly influenced their sexual practice. Many younger MSM used alcohol and drugs while having sex and behaved in ways that

carry a high risk of HIV infection. This study is in line with my analysis, which found that older respondents knew more about safe sexual practices, and MSM said they used drugs and alcohol with sex.

7.5.1.2. Gender-based violence

Gender-based violence (GBV) is common in the Islamic world and MENA and is accepted by society and religion. According to UNAIDS (2014b), MSM's access to HIV harm-reduction efforts are limited by S&D, sexual orientation, GBV and the criminalisation of same-sex relationships. This matches my results: MSM complained in their FGD of intense S&D, harassment and public shaming from their family and friends, at work, from religious leaders and especially at healthcare facilities, all of which impede their healthcare-seeking behaviour, with many hazardous side effects.

UNAIDS, UNICEF and WHO (2004) report many factors in Egypt that create gender discrepancies in the figures on the incidence and prevalence of HIV infection including social acceptance of men but not of women taking multiple sex partners, and cultural-sexual norms such as allowing women little or no control over their bodies, GBV, and women's unequal rights. This matches my respondents' accounts, especially those of the FCSWs who mentioned the physical and psychological abuse and harassment they were subjected to at home, on the streets, with clients and by the police, in their FGD. Female IVDUs mentioned that society is more tolerant of male than female substance users, especially if the pattern of taking drugs is intravenous and if substance use is associated with undisciplined sexual behaviour or commercial sex. They added that families are more willing to treat a son who is a substance user than a daughter, with the latter forced to marry in a hurry to get rid of the shame and make people forget the scandal.

The above reports confirm my own findings: many of my female participants were subjected to gender-based violence and gender inequity. Paradoxically their fathers and brothers beat them to compel them to engage in commercial sex, at the same time stigmatising them and calling them prostitutes. One substance-user FCSW's father had beaten her just before the FGD, and she offered to show us the marks on her back. Due to this violence by male family members the substance-user FCSWs despised Eastern men, calling them liars and cheats, especially because many would not notify their wife or sex partner if they were HIV-seropositive. They yearned for a modern-thinking civilised man who would marry them and not investigate their past.

7.5.2. Religion

Egyptian society is traditional, conservative and religion-bound. This means that not only is religion embedded deep in the culture but it also influences the ways in which Egyptians conceptualise individuality, autonomy and control in relation to health and disease. Religion also shapes decisions about taking drugs and responses to adverse conditions such as being a substance user or infection with BBVs/STIs. Religious leaders therefore have a pivotal influence and role in the everyday lives of Egyptians. In this section I compare and contrast various studies and reports on the link between culture and religion and its influence on the risk factors leading to HIV infection.

The following literature looks at Islam's influence on Middle Eastern and non-Middle Eastern Islamic societies. The literature matches my study findings in that it links religion with gender and stigma and shows the huge role of religion and religious leaders in Egyptian society and their influence on issues of drugs and sex. However, the literature looks only at HIV and not other BBVs, do not link sexuality, BBV/STI infection and substance use and do not study substance users and the three subcategories of MARPs, as my study does.

Nasirian, Karamouzian and Haghdoost (2013) describe how Islam still has a huge influence on culture and customs, and prohibits extramarital sex and Razzaghi et al. (2005) discuss how any premarital or extra-marital sex is considered adultery and severely penalised in Islam. Forced marriage, GBV and homophobia are all prevalent in the MENA region. This matches my results: the FCSWs in their FGD told of how young people resort to premarital and extramarital sex to relieve their stress. FCSWs mentioned the GBV to which they were subjected at home and sometimes at work or in society – one raped by a male client was so traumatised that she stopped having sex with men and turned instead to her fellow FCSW. MSM also mentioned that they were exposed to violence from their families, in their neighbourhoods and in prison.

Kamarulzaman and Saifuddeen (2010) mention that although drugs are *haram* (sinful) and prohibited in Islam, illicit drug use is nonetheless widespread in the Arab world and many Islamic countries worldwide. In the past few years the growing use of drugs via intravenous injection has led to increased HIV prevalence in the Islamic world. In Islam the Qur'an and the Prophetic Traditions (*Sunna*) are the central sources of reference to the laws and principles that guide Muslims' lives, especially regarding response policies. The teachings of Islam encourage people to avoid harm, which is why, from the Islamic perspective, harm reduction programmes are an appropriate and feasible solution for

many problems. As attested in my research, in Egypt the role of religious leaders in curbing the BBV/STI epidemic through the UN, CSOs and drug rehabilitation programmes has been pivotal. My substance users had great respect for religious leaders and wished their religious discourse was more merciful and compassionate and their role in preventing the spread of BBVs/STIs was greater. Both substance users and policymakers in my study called for religious leaders to be incorporated in all initiatives for substance users to prevent the spread of BBVs/STIs, after proper training to increase their insight and raise their awareness.

Similarly, a qualitative study conducted by Saddiq et al. (2010) in north-east Nigeria, the predominantly Muslim part of the country, explored community members' views of the relationship between polygamy and vulnerability in the light of resilience to HIV/AIDS. Participants in this study included religious leaders as well as various groups of men and women. The study found that social relationships are influenced by religion, tradition, gender roles, education and socioeconomic class. It recommends that medical personnel's efforts to prevent the spread of HIV and empower men and women in order to increase their resilience to HIV/AIDS should also include religious leaders. This is in line with my qualitative results and recommendations, as my study found that both substance users and policymakers stressed the significance of the role of religious leaders and how a change to a merciful and empathetic religious discourse may help to recover substance users and MARPs and help them to cope better with and integrate into society.

Farmer (2006) argues that in Egypt the well-known government reaction to HIV infection blames other cultures for it; the government ascribes it to blood transfusions to individuals who have visited the Gulf and sexual transmission while travelling abroad. Farmer explains that Egyptian cultural and social norms, which frown upon undisciplined sexual behaviour, may lead to the discrepancy between the government's figures on declared HIV cases and those estimated by the UN. This matches my respondents' accounts, as FCSW and female IVDU substance users claimed that HIV has been imported from the West and that one can only be infected via sex with a foreigner. Some substance users thought that HIV has been imposed on the Islamic world by the Christian West: Muslims should not have HIV/AIDS because Islam teaches chastity.

According to Soliman (1995), Muslim fundamentalist women support the Islamic principle of banning sex education and see HIV/AIDS as a plague originating from the 'immoral Western culture'. This is in line with my qualitative study, in which the CEO of the first PLHIV-led NGO in Egypt mentioned that when he and his team tried to

introduce sex education at a national language school in Alexandria, the parents were provoked and accused him and his teams of being traitors and spies for the West, claiming that HIV/AIDS is a Western disease and that the team had an Western agenda to spread vice among Egyptian school children. Soliman and colleagues state that although several hospitals in Cairo and several rural hospitals have HIV testing and surveillance schemes, these are still limited to MARPs. This agrees with my participants' accounts, as they stated that the VCCT and harm reduction services are scarce and not influential in Egypt. The next ten studies and reports emphasise the crucial transformational potential of religious leaders in their communities. In some countries the religious leaders are insightful enough to promote the prevention of the spread of HIV in a much more tangible and effective way. The findings of this literature match my findings in several ways.

Researchers into this connection in Muslim-African countries include Speakman (2012) who, looking at high HIV prevalence rates in Africa and the relatively lower prevalence in the MENA region, questions how the religious discourses of Islam and Christianity might influence the HIV epidemic and the future of believers. This matches the accounts of my participants, who saw religion as protecting the MENA region from the threat of an HIV/AIDS pandemic due to the religious culture and the highly esteemed religious leaders' opinions and advice, which has a strong influence on everyday life in Middle-Eastern homes. Substance users and policymakers agreed that the more understanding and sympathetic the religious discourse, the more substance users and MARPs would be encouraged to reform, seek healthcare and get actively involved in society. PLHIV are more affected than MARPs because in their hope that religious leaders transform their attitude to one of kindness and understanding they see potential for coping better with their disease and living more positively in a prejudiced society.

Maulana and colleagues' (2009) study in Lamu, a Muslim community in Kenya, states that Islamic verses from the Qur'an and *Sunna* offer a solid platform from which religious leaders can promote health and address HIV infection and its related stigma by choosing verses pertaining to sexual conduct, health, stigma and Islamic leaders' responsibilities towards their believers. Under certain circumstances these texts even justify safe-sex methods, including condom use. This is somewhat different to the situation in Egypt, where the majority of religious leaders are reluctant to advocate sex education and still preach a harsh and blaming discourse against substance users, MARPs and PLHIV. A few Egyptian religious leaders, however, have positively transformed their knowledge, attitudes, behaviour and religious discourse on the nature of HIV/AIDS through the

conjoint efforts of UN agencies and the MOH, although many of these feel guilty about approving the distribution of free condoms to substance users. The imam in Alexandria condoned distributing clean syringes to substance users as part of a harm reduction policy, but not condoms, as he felt they would encourage vice. Winter (1996) reports that in Mauritania condom distribution is still scarce except for married couples. In its quest to curb the spread of HIV one NGO has recruited an imam who explains to the community the role of condoms in preventing the spread of BBVs/STIs, and tells them they should not spread vice by encouraging illegal sexual practices. In a way this is in line with my qualitative results, as the policymaker imam said in his IDI that religious leaders should use their influence by joining HIV prevention initiatives. Trained by the UN, this imam at his mosque has a big role in the spiritual rehabilitation of substance users and tries to help them settle their life within the marriage bond, and although he refuses to distribute condoms as part of the harm reduction services for fear of spreading illegal sexual practices as mentioned in the last paragraph he gives clean syringes to substance users who seek his help when contemplating quitting using drugs.

To emphasise initiatives to promote the efforts of religious leaders in response to HIV/AIDS, HARPAS (2009) records how stigmatisation and discrimination against MARPs and PLHIV impair efforts to reduce HIV/AIDS in MENA region. Thus it is crucial to recruit and train influential Muslim and Christian religious leaders to tackle HIV/AIDS. Because there is a taboo against both illegal straight sex and same-sex relationships, denying its real burden in MENA, MARPs in MENA avoid seeking medical services due to fear of being publicly shamed and harassed. HARPAS corrects the impression that HIV figures are low in MENA due to its conservative religious culture, as the estimated figures by the UN is much higher (ibid). This report matches my qualitative findings, as substance users and policymakers stressed the pivotal role of involving religious leaders in all that is related to sex and HIV/AIDS, and recommended that religious discourse should be more merciful and non-stigmatising. The imam working with substance-users in Alexandria is a living example of a considerate and understanding religious leader. The MSM substance users said that they were pleased and with the change in religious leaders' attitudes at the conjoint meetings from prejudiced to understanding and sympathetic after listening to MSM's testimonials about their personal suffering due to the intense S&D to which they were subjected every day in all settings.

Hasnain (2005) argues that most Islamic countries that were previously seen as having low HIV incidence and prevalence owing to their conservative cultural and religious

norms are currently facing an alarming escalation of HIV infection. As sexuality is still regarded taboo in the community, harm reduction as a practical approach to HIV prevention remains highly underused. Hasnain recommends that for such an approach to work it should involve religious leaders as vital collaborators, incorporating HIV prevention and treatment strategies within existing social, cultural and religious norms. This is in line with my study findings: both my participant substance users and the policymakers said in their FGDs and IDIs, respectively, that Islamic countries are in denial about the staggering increase in HIV infection figures, whether new or existing, claiming that HIV comes from the West and maintaining the taboo against sexuality. The substance users and policymakers complained that HIV prevention services are unrecognised, inefficient, scarce and not influential.

Kaadan (2004) stresses that despite the fact that HIV/AIDS is stigmatised worldwide, HIV-related S&D are very strong in Islamic countries due to the cultural and religious norms. This is why, for any stigma-reducing initiative to be influential it is crucial that it is rooted in Islamic teachings, which will be best achieved through the involvement of religious leaders, especially in educational programmes.

According to Parker (2000), religious leaders strengthen HIV-related S&D through their high status and strong influence on Muslim homes, which maintains prevalent misconceptions and stigmatising attitudes towards MARPs and PLHIV. Parker describes how the existing interpretations of religious doctrines and teachings and the moral and ethical norms related to sexual behaviour and homophobia imply that substance users and PLHIV are sinners and deserve punishment from God. This matches my results: substance users' views in their FGDs concurred with Parker's observations. They mentioned that they suffered from religious leaders' prejudice against and hostility to them, which originates from the fact that these leaders have not been received any sex education and are ignorant of the nature of HIV/AIDS. The substance users wished that their condemnatory and judgemental religious discourse were more sympathetic and compassionate, which would attract them to seek spiritual guidance from the religious leaders and also to seek healthcare. Some of them gave examples of merciful Muslim and Christian religious leaders whom they liked. The MSM particularly were touched by the dramatic change of attitude in the strict Muslim religious leaders who had attended meetings with MSM and heard MSM's testimonials about how much they suffered every day. Policymakers agreed with the substance users' accounts; the imam helping substance users saying that Muslim religious leaders should be at the core of any initiative for

curtailing HIV/AIDS and that his assistance in his capacity as an imam was helping many recovered substance users to marry, create a family, build a home and settle down, all of which help to maintain their recovery. Along the same lines, Ali (1996) suggests that religion-based advocacy for harm reduction and the compassionate acceptance of PLHIV is an effective new initiative in many Muslim countries amidst the widespread unjust S&D against PLHIV. This matches my study findings, as the MSM substance users stressed their need to be understood and appreciated by religious leaders and wished that they would consider recognising gay sex as an alternative lifestyle like straight sex. FCSWs also expressed their wish for a non-condemnatory and compassionate religious discourse. Policymakers agreed with the substance users' accounts.

Khan (2004) describes what he calls a 'culture of obedience': women in Pakistan obeying the male members of their nuclear and extended families who prohibit them from seeking healthcare. This was also recognised at the UNAIDS Expert Group meeting on the HIV/AIDS Pandemic and its Gender Implications (2000), where the 'culture of silence' around sexual issues in many societies, which means that the 'righteous, good' woman is expected to be ignorant about sex issues and passive during sex, was described. This makes it difficult for women to claim their rights to know about risk reduction and negotiating safer sex with their husbands, and trying to access BBV/STI treatment services can be intensely stigmatising for girls and women. This power imbalance affects gender relations, sexual interactions and women's use of treatment services. In many settings women are deserted, persecuted and sometimes killed after notifying their partners of their HIV seropositivity. This matches the accounts of my female IVDUs, FCSWs and policymakers, who agreed about the inferior status of women in the Egyptian society and how the woman is expected to act as if she is holy and pure at all times, especially regarding sex. Women are expected to postpone satisfying their sexual urges until marriage and are extremely stigmatised and discriminated against in the case of substance use or HIV infection, when they are accused of working in commercial sex. This has serious repercussions including killing, public shaming, the breaching of their confidentiality, being dismissed from their work, abandoning and being deprived of the custody of their children and prohibited from seeking healthcare for potential or actual infection or for rehabilitation from substance use. The magnitude of the problem is further exacerbated in case of marriage.

The following three resources discuss fatalism in Islam while the last two discuss it in Christianity as follows. The resources agree with the accounts of my participants' accounts.

Shawky et al. (2009) explain that religion is still embedded in Middle Eastern traditional and conservative societies despite a recent shift to more liberal sexual attitudes and behaviour among the young. This matches my results, as MSM substance users said in their FGDs that many of them fast and refrain from sex during Ramadan so as not to anger God. The MSM were extremely keen to win over the religious leaders and make them understand their background, their motives for practicing gay sex. The FCSWs in their FGD said that they preferred a strict Muslim religious leader and the late compassionate Coptic Christian pope. With regard to fatalism, most of the FCSWs in the FGD said that they would get closer to God if they found out that they were HIV-seropositive. Several substance users from various backgrounds expressed in their FGDs that substance use and HIV infection was their fate, designated by God, over which they had no control.

Hamdy (2009) points out that concepts of human behaviour sway between the poles of absolute passive reliance on God's will on the one hand and active action in this world on the other, and argues that the Muslim tendency toward fatalism is a major obstacle to the development of science. Hamdy's findings are also applicable to medical science and healthcare in Egypt, and to how my participants understood their options when seeking healthcare: most were fatalistic, although a few were not, and were held responsible for being addicted to drugs and when got infected by one of the studied BBVs/STIs.

According to Weber (1998) fatalism is a well-known aspect of Middle Eastern and especially Islamic culture. A vital factor in Egyptian everyday life, it is also significant in healthcare as it affects how individuals allocate the responsibility for their disease and control over their fate. This is in line with my participants' accounts: several substance users of both genders and religions and with different educational and socio-economic background and sexual orientation had a fatalistic perspective to which they owed much of their substance use problems and complications such as BBV/STI infection.

Fatalism also exists in Christian religious beliefs, as discussed by Zimmerman (2010). Acevedo (2008) argues that Christians living in the Islamic world are generally as fatalistic as the Muslim majority, and sometimes even more so. However fatalism was not apparent in my Christian FCSW account or in the Christian policymaker's pilot IDI.

These two studies describe the Muslim religiosity index and whether religion affects KAP regarding risk behaviour. These two studies agree with the findings of my study as

mentioned in the next paragraphs. The dissimilarities are that these studies were conducted on non-substance-user individuals or MARPs, were not mixed method approach and did not link sexuality, BBV/STI infection and substance use.

Gilbert (2008) mentions that Senegal, a predominantly Muslim sub-Saharan African country with the lowest HIV prevalence in SSA in 2008, has involved Muslim religious leaders in its HIV prevention campaign for over ten years. Gilbert's study, which only looks at HIV and does not include the other BBVs/STIs, examines how Islam influences HIV prevention by testing how the Senegalese participants' level of religiosity affects their risk decisions regarding sex and drugs. Gilbert found that those with higher religiosity scores were more likely to abstain from sex and not to use condoms when they were sexually active. This is the same as in Egypt, where highly religious Muslims generally refrain from illegal sex and from using condoms even within marriage. Hence high religiosity does not always help people to avoid the risk of BBV/STI infection. The similarity with Gilbert's study is that in my study, substance users' condom use was also found to be low. I found that active drug users were not as religious as rehabilitation graduate substance users. The policymakers mentioned that during active substance users' recovery their idea of God changes from a punishing to a more loving, kind God, and many become highly spiritual.

Gańczak et al. (2007) investigated the increasing spread of HIV in MENA and estimated the KAP and educational needs of young people in the United Arab Emirates. They found that the majority of young adults' knowledge scores regarding HIV/AIDS were low, and while the majority knew the main transmission routes, distorted and truncated information still existed. The majority of the sample gave Islam as a reason for avoiding extramarital relationships and contracting STIs. However, almost half of the tested sample were intolerant of PLHIV. Gańczak and colleagues also report that half of the participants perceived the current education about STIs in schools as insufficient. The young people's main preferred information channels were the media and school. Alarming gaps in their knowledge about BBV/STI transmission puts young Arab people at risk of contracting HIV. While my sample comprised substance users and MARPs rather than Gańczak's sample of the general population, there are similarities in my research regarding the respondents' poor knowledge and risk attitudes in relation to sexual practice and their stigmatisation of PLHIV; and my study also tested KAP regarding risk behaviour and emphasises the need for sex education.

7.5.3. Stigma and discrimination

As discussed in Chapter 6, the population that I studied faced a lot of S&D in their lives but also related to one another in stigmatising ways. So not only does the stigma translate into institutionalised discrimination but there is also discrimination between the different subcategories of MARPs and PLHIV. Stigma pushes people apart but also binds them together (Goffman, 1963). In the following section I discuss the complexity of these discriminatory practices in the family, the workplace, religious institutions, healthcare facilities, the judiciary system and the police, and then I discuss substance users and MARPs' internalised stigma, which is a major factor in how they relate to one another and influences prevention strategy via peer-to-peer outreach and education. This information can be used in developing a framework for understanding how peer-to-peer outreach and education prevention strategy can be introduced and improved.

I first look at studies discussing S&D within families. Some show families playing a supportive role in the lives of substance users, MARPs and PLHIV, while others reveal families' negative influence on their substance users and PLHIV. Those who report on supportive families include

Aggleton and Warwick (1999), who stress the importance of family as the major provider of care for PLHIV in most developing countries; negative attitudes and behaviour toward PLHIV family members have a strong effect on them as they deprive them of pivotal support. Terto (1999) adds that even with a positive family response to a PLHIV member, fear of community stigmatisation and discrimination prevents the latter from disclosing his or her seropositivity outside the home. According to Daniel and Parker (1993) the manner in which HIV-related S&D manifests depends on the degree to which people can disclose their sexuality and seropositivity, and on their family and societal support.

All of studies above agree with my results. Some of the respondents in my sample stated that their families spent a lot of money providing for their multiple rehabilitation attempts. They appreciated their families' trust and admiration after their recovery and expressed how much it meant to them that they tolerated their diseases such as HIV/AIDS and faced the societal stigma to protect them from it. A female psychiatrist policymaker stressed the significance of supportive families, calling them 'a mighty army'. A substance-user MSM mentioned in the FGD that while his family tolerated his 'sissy' body language they could not accept it in his fellow MSM.

The studies below emphasise the potentially devastating role of family in substance user and MARPs' lives. All these studies match my study findings.

Terto (1999) reports that in some countries MSM living with HIV/AIDS are afraid to notify their families of their same-sex attraction and relationships. In other countries and in corresponding ways, FCSWs and IVDUs fear the same. Bharat and Aggleton (1999) enumerate negative family responses as blame, rejection, banishment and even cutting off contact with their own child. Families reject their PLHIV members not only because of their HIV seropositivity but also because they are ashamed and disgusted by them, as HIV/AIDS is often associated with substance use, gay sex and multiple sexual relationships (Mujeeb, 1999). According to Nardi and Bolton (1991), HIV-related S&D from families and society takes the form of blame, public shaming, scapegoating, aggression and punishment. Kegeles et al. (1989) assert that some cultures consider HIV infection the PLHIV's own fault and that he or she alone should be blamed for the immoral and deviant behaviour that led to it.

These five studies match my participants' responses, with many of the MSM and PLHIV substance users complaining of their families' hurtful treatment. Some complained that even after long years of rehabilitation and recovery their families' prejudice against them had not changed; distrust and lack of esteem were always present 'like a scar'. The stigmatisation increased with substance users' multiple relapses and was more intense in cases of HIV infection and gay sex than of illegal heterosexual sex or other BBVs/STIs. The substance-user MSM and PLHIV were particularly bitter when recalling how they had been thrown out, publicly shamed and deserted by their families once their condition was known. A few PLHIV substance users concurred that they suffered stigmatisation from their extra-caring families because, they felt, their families expected them to die and implicitly passed on this negative feeling, which made them lose their hope of living positively with the virus. However, these studies discussed only stigma and sexuality and did not link to substance use as I did in my research.

The workplace is investigated by Jugdeo (2009), who records his study in South Africa, a predominantly Christian African country, exploring HIV/AIDS stigma in the workplace and focusing on the stigmatised. His analysis of IDI data found that most of the PLHIV participants' families and friends had rejected them when they learned of their HIV seropositivity, while other participants were afraid to disclose their serostatus, presumably fearing this response. The entire sample felt that others saw them as 'unclean' and complained of prejudicial and discriminatory acts. Jugdeo attests that as part of their coping mechanism seropositive employees just walked away from enacted stigma. This matches my research findings: one male substance-user PLHIV complained of enacted

stigma and persecution on the part of some employers when they discovered that an employee had HIV/AIDS, and explained that if a company suddenly decides that its employees must submit to blood tests and a person is discovered to have HCV – not even HIV – she or he may be fired and is publicly shamed.

Looking at stigmatisation on the part of religious institutions, Parker and Aggleton (2002) elaborate on how religious leaders and their institutions strengthen HIV-related S&D by using their influence to maintain rather than challenge S&D against substance users, MARPs and PLHIV. With their interpretation of religious doctrine and their moral and ethical positions on sexual behaviour, and indeed with some individuals' homophobia, these religious leaders often imply that PLHIV have sinned and deserve their punishment from God. This is consistent with my results: many substance users and policymakers in my sample populations gave examples of the hatred and prejudice of religious leaders towards this highly vulnerable population and its subcategories when they were in dire need of support and empathy. Religious leaders enjoy great respect and admiration in Egypt and have a tremendous influence on people's perceptions, attitudes and behaviour concerning everything related to sex and drugs. Egyptian society is religion-bound and conservative, with a blind trust and belief in its religious leaders. The participants wished that the latter would adopt a more empathetic, merciful and understanding religious discourse which would help with the rehabilitation and transformation of these underserved, overshadowed and stigmatised populations. However, there are few examples of religious leaders who have been trained to offer appropriate and full sex education via the conjoint efforts of the United Nations, MOH and CSOs, to support substance users. This is in line with my substance users' accounts in their FGDs.

S&D in the Egyptian judiciary system and the police are harsh. The next four studies emphasise the stigmatisation that substance users, MARPs and PLHIV face in this area and their results match my own.

Watney (2000) calls government failure to protect the human rights of PLHIV, for instance by failing to provide proper HIV prevention, treatment and care for MARPs through new legislation or by strengthening existing legislation, 'discrimination by neglect'. Gostin and Lazzarini (1997) report examples of HIV-related S&D, including obligatory HIV-screening and testing, mandatory notification of HIV seropositivity to family, the denial of PLHIV's right to anonymity, banning PLHIV from joining certain occupations and their isolation, detention and involuntary treatment. Along the same lines, Kirp and Bayer (1992) suggest that the HIV-related enacted social stigma

commonly manifests in the form of laws and policies and is seen to be justified, as it protects majority rights in society. Cole, Zhang and Chen (1993) enumerate a few causes of HIV-related S&D such as lack of proper knowledge about HIV/AIDS, poor 'moral attitudes' and believing that caring for PLHIV is useless because HIV/AIDS is inevitably fatal.

The results of these three studies match my own, which found that participants condemned the government's intense enacted S&D and its failure to protect their rights. In the FGDs substance users said that the police harassed them and locked them up on suspicion of being substance users based on their possession of a syringe. Substance-user MSM faced the same police treatment if found carrying condoms, as well as being subjected to a humiliating rectal examination by forensic medicine personnel against their will and in front of both medical and non-medical personnel. Substance-user PLHIV said that police officers attach unsolved crimes to substance users, especially at the end of the fiscal year when they are required to achieve a certain target for solving suspended crimes, and reported being given high sentences based on their HIV seropositivity despite the fact that nothing in Egyptian law punishes an individual based on his or her state of health, even if he or she has HIV/AIDS. PLHIV further complained of inhumane treatment by prison officers, other inmates and even healthcare professionals. One PLHIV recalled his experience when detained at a police station on charges of male debauchery and being HIV-positive. His mother went to visit him with food and tried to locate a lawyer who would help her to bail out her son. The guard by his cell breached the PLHIV's confidentiality and accused him of being gay, telling his unknowing mother that he was HIV-positive. He even advised her not go to the trouble of bringing him a lawyer as he was dying anyway, and would 'burn in hell'.

The next studies I discuss all looked only at HIV and not at other BBVs/STIs, as my study did. My qualitative results match their results, as they discuss S&D towards PLHIV and MARPs in healthcare facilities. Mahendra et al. (2007) report that S&D in India included drastic actions such as the burning of PLHIV's beds after deliberately discharging them from hospital in the middle of their medical care; a study by the Tanzania Stigma-Indicators Field Test Group (2005) found healthcare staff's HIV-related S&D against PLHIV in the forms of neglect, denial of treatment, breaches of confidentiality and verbal abuse; in Ethiopia the same Tanzanian group (2004) report that healthcare workers referred PLHIV to other facilities without first giving them HIV counselling or creating a plan for their next care steps; in Senegal, Ford et al. (2004) and in Indonesia Niang et

al. (2003) found that MARPs such as IVDUs and MSM postponed or did not seek medical care for fear of discrimination and public shaming by healthcare personnel; in Botswana (Wolfe et al., 2006) and Jamaica (White & Carr, 2005) found that S&D prevented those who wished to use VCCT services from initiating this until they reached the terminal stages of their disease, when they were had to use it to seek the care they needed; Mills (2006) reports that in South Africa PLHIV resort to grinding their ARVs to powder and taking them surreptitiously to avoid public shame, which negatively influences their adherence to the treatment and exposes them to several medical hazards; Adebajo et al. (2003) discuss how a third of the healthcare workers in their sample in Nigeria morally judged PLHIV and held them responsible for their HIV infection; the National Institute of Public Health Mexico (2004) found that three quarters of the healthcare staff participants surveyed held PLHIV responsible for their infections due to their bad deeds; Bharat, Aggleton and Tyrer's (2001) study reveals that healthcare systems can fail to respect PLHIV's privacy and confidentiality, labelling them and disclosing their seropositivity to their family, the media or police without their consent; and according to Daniel and Parker (1993), the manner in which the stigma attached to HIV manifests depends on the degree to which people are able to disclose their sexuality and seropositivity and on the availability of familial and societal support. Internalised stigma compels PLHIV to isolate themselves from their community, hence they do not seek healthcare services.

All of the above studies concur with my findings that substance users, especially MARPs and PLHIV, were terrified to use healthcare services, strongly jeopardising their health. They bitterly reported the harsh prejudice and hostility that they were subjected to in many settings such as within the family, among friends, in the workplace and at healthcare facilities, the judiciary system and religious institutions. In their respective FGDs they reported the different patterns of S&D that they faced on a daily basis. The policymakers concurred with the substance users' accounts. Only the few respondents who volunteered or worked for harm reduction and VCCT services knew that these existed at all. There was a consensus between substance users and policymakers that VCCT services, harm reduction facilities and AIDS Hotline are scarce and ineffectual, and condemn and judge substance users and PLHIV.

In HIV/AIDS stigma theory scholars frequently differentiate between the stigmatisation of victims accidentally exposed to HIV infection such as through blood transfusion or HIV-seropositive husbands infecting their wives, and that of those whose own behaviour,

such as engaging in unsafe sex or unsafe drug injection, led to their infection. This makes HIV-related S&D a complex issue, as seropositive individuals suffer from HIV-related S&D and pre-existing stigmatisation such as that of gay men and commercial sex workers, augmenting the prejudice and hostility towards the HIV-infected individual (Keusch, Wilentz & Kleinman, 2006). This matches the accounts of all my respondents regarding the prejudice, hostility and aggression to which they were subjected regarding drugs, sex and HIV infection.

To synthesise the participants' accounts with my observations, there is also S&D between substance users and different sub-groups of MARPs, as mentioned in Chapter 6. There was even stigmatisation among the different subcategories of the rehabilitation graduate substance users who work as 'peers' in the outreach sector contacting active substance users and inviting them to use harm-reduction and rehabilitation facilities. For instance heterosexual peers would only contact heterosexual active substance users, stigmatising and ignoring gay active substance users and rehabilitation graduate peers who were MSM. These two groups of outreach peers had to be segregated to different Freedom Programme offices and had no contact at all even though they were under the same management. As mentioned in the accounts of substance-user MSM in Chapter 6, the PLHIV support groups also had to be divided into two, with separate venues and dates, so that those who had contracted the infection through intravenous injection did not want to interact with those who had contracted it through gay sex. Although the gay outreach peers seeking to bring in active gay substance users had successfully recovered from their substance use they still practiced gay sex, which was seen as perfectly acceptable as the point was primarily to help substance users, and especially IVDUs, to rehabilitate, with the option of addressing their recovery from other practices later. In the Freedom Programme's internal conferences and seminars each team of peers could be seen avoiding the others and interacting only with its own members.

Obstacles that block stigma-reducing efforts are discussed below. The following studies and reports elaborate on these barriers, matching my substance user and policymaker respondents' accounts.

Lohiniva et al. (2015) cite Byakika-Tusiime et al. (2009) and Turan et al. (2011), who emphasise how the fear of HIV-related S&D results in PLHIV avoiding HIV testing, disclosing their seropositivity and failing to adhere to ARVs. Lohiniva and colleagues (2015) also cite Nyblade et al. (2013), who point out that HIV-related S&D prevent PLHIV from seeking healthcare in medical institutions. Stangl et al. (2013) find that

prejudice and hostility block efforts to reduce the number of new HIV infections as well as to involve PLHIV in prevention and treatment strategies. Many studies (Brou et al., 2007; Abdool Karim et al., 2008; Bwirire et al., 2008; Deribe et al., 2008; Byakika-Tsuiime et al., 2009; Turan et al., 2011) have found an association between exposure to HIV-related S&D and willingness to take an HIV test, disclosure of HIV infection, and poor ARV use and adherence. Internalised stigma has a negative effect on the individual who is confronted with the stigmatising expectations of society, which are a famous hurdle to adherence to ARVs (Corrigan & Penn, 1999; Corrigan & Watson, 2002; Rintamaki et al., 2006; Sabin et al., 2008; Dalmini et al., 2009; Johnson et al., 2009; Rao et al., 2012b).

7.6. Strengths and limitations of this research

7.6.1. Strengths

Some of the following strengths help to explain why my findings differ from those of other studies.

My qualitative investigation allowed deeper understanding of the quantitative findings, with participants using their own words to express their perspectives. The FGDs identified the agreements and disagreements between the members. The interaction between the participants and myself as facilitator enabled me to access deeper impressions and points of view.

The sample included substance-user participants from various backgrounds and orientations: their ages, socioeconomic and educational levels, substance-use patterns and patterns of recovery and relapse, history of imprisonment, BBV/STI infection, marital status and sexual orientation. Working with this highly-stigmatised, discriminated-against and extremely hard-to-reach population of MARPs and its overlapping subgroups was a privilege.

The sample of policymakers was rich, as it included eleven experts on drugs and HIV/AIDS in Egypt from varying socioeconomic, educational, political, occupational and religious backgrounds and affiliations. They included men and women; some were public figures, and most importantly some were rehabilitation graduate substance users themselves who knew the mind-set of active and rehabilitating substance users better than any other expert and were able to convey how substance users think and what sort of prevention strategy would work best for them.

My study is original in linking BBVs/STIs with sex education, and substance use with sexuality, and in siting this research in an Arabic Middle Eastern country with a male-dominated and predominantly Muslim conservative culture such as Egypt. The study describes society's enacted stigma regarding sex and drugs.

The assistance of three interested, qualified facilitators who were all knowledgeable in the field of drugs and HIV/AIDS was helpful, as was the scholarship that provided the funding to support this study.

Having volunteered in rehabilitation programmes for many years, and especially with the pioneering Freedom Programme, the largest drug rehabilitation programme in Egypt and the Arab world, I had experience and connections in the field. Knowing the founder and president of the programme, a consultant psychiatrist, was a privilege and gave me the opportunity to learn more. I had worked under his supervision at the UNDP, where I had learned the connection between substance use and BBVs/STIs, especially HIV/AIDS. Being a clinician and trainer at the Freedom Programme facilitated good relations with the administration and lent me authority, both of which helped my research to a great extent. I formed a wide network of connections with policymakers and experts in the field concerned with substance users and HIV/AIDS in Egypt. This again was very rewarding, both when gathering my data and due to the enriching and invaluable input that I received.

7.6.2. Limitations

The study population linked to the Freedom Programme was not representative of all substance users in Egypt, the majority of whom are poor and have little or no education, unlike my more educated middle-class sample.

The KAP survey did not have a full sampling frame including all potentially eligible participants, so the generalisability of the results is uncertain. Also, some substance users were impatient or perhaps did not understand the questionnaire well, so many questions were left unanswered.

Some of the quantitative surveys cited from the literature employed much larger samples than mine, which is one reason why our results differed. My background of positivism and reliance on tangible scientific data influenced my interpretation of the responses to the qualitative studies; furthermore, the participants' perception of me as part of the Freedom Programme establishment may have influenced what they told me.

While participant observation was not part of this study design, my experience of working with the Freedom Programme for several years had already given me some insights,

which helped me to interpret the findings. The overwhelming amount of data was so exhausting to handle that I found myself unable to objectively evaluate the effectiveness of preventive interventions beyond the scope of my research.

The study was expensive, especially because the MARPs asked for more monetary compensation than I had planned to give them. It was also time-consuming, especially when identifying and gathering enough substance-free and fully-conscious MARPs for the two-hour sessions.

Some substance users were highly sensitive and my research facilitators and I had to practice caution all the time and tread lightly so as not to hurt their feelings or cause them the slightest embarrassment. Working with the substance users was frustrating at times and required exhausting application of control. A few substance users were unable to comply with the terms and conditions of the FGDs and so I found moderating the MSM and PLHIV FGDs, in particular, difficult.

7.7. Priorities for future research

The findings of this study and of previous research suggest that the following types of research should be prioritised:

- similar research is needed among substance users who have not engaged with drug rehabilitation programmes;
- other ways of asking critical questions in the survey need to be explored, as substance users are generally more sensitive than non-addicts;
- a follow-up study of the substance users who participated in the original KAP survey would describe how their KAP changed over time, and which factors were associated with those changes, such as exposure to prevention initiatives;
- the impact of S&D, a major finding in my research, should be tackled in further detail, for instance via a new KAP survey focusing on stigma combined with FGDs and IDIs with other key informants;
- the incidence and prevalence of BBVs/STIs among substance users of various categories and the level and type of stigmatisation that they encounter should be compared;
- more rigorous research is required to evaluate the effectiveness and acceptability of new methods of prevention using randomised trials and qualitative process evaluations.

7.8. Implications of the findings for stigma reduction and BBV/STI infection prevention among Egyptian substance users

Both the literature and my findings reveal some strong potential policy points. The three sections below discuss efforts to combat S&D that have been made across the world, in the MENA region and in Egypt. This is followed by discussion of the barriers to efforts to eliminate HIV-related S&D.

• Globally

Earnshaw et al. (2013); Schwartländer et al (2011) and Stangl et al. (2010) state that reducing the stigma helps ARVs to be more effective, and this should be mainstreamed into national strategic planning. Similarly Stangl et al. (2013) emphasise the importance of stigma-abolishing interventions as the core of the HIV response.

Theobald et al. (2011) recommend creating a public place in which to hold a dialogue on sexual and reproductive health in conservative communities. The dialogue should initiate a liaison between stakeholders working with sexual minorities and scholars, NGO representatives, activists, healthcare staff and media personnel.

On the individual level of tackling stigma, Nyblade et al. (2009) elaborate how the first step is to raise PLHIV's awareness about stigma and its complications, such as the poor care they get and their failure to disclose HIV seropositivity and non-adherence to ARV medication. It is necessary to handle healthcare staff's fear of contagion and misperceptions about HIV/AIDS, which lead to devastating daily prejudice and hostility. All healthcare staff should be taught about HIV epidemiology, stigmatising behaviour related to HIV and its negative effect on PLHIV in order to create a comprehensive non-stigmatising attitude in healthcare facilities.

It is worth stressing that treating PLHIV as humans needing care and not as neglected and deserted carriers of a deadly virus, and involving them in stigma-reducing initiatives make it easy for staff to realise the magnitude of their stigmatisation. At the environmental level, Nyblade and colleagues describe how influential stigma-reducing strategies should make sure that healthcare staff have the necessary proper professional data on the cardinal universal precautions against HIV transmission. At the policy level, Nyblade et al. (2009) stress that without certain policies that protect PLHIV's rights to proper care, healthcare staff's S&D would never stop. In order to be influential these policies must ensure staff participation in games, role play and exercises that will help them to recognise their

behaviours. The attitude and behaviour of staff should be periodically monitored. Parker, Easton and Klein (2000) say that relying only on individual psychological initiatives to abolish S&D is not feasible, as approaches should relieve societal pressure on the stigmatised, e.g. talking about HIV/AIDS and PLHIV in a realistic and professional manner in society in educational programmes.

Nyblade (2006) argues that expansion of the knowledge about HIV-related S&D is vital for any HIV prevention and treatment initiatives to succeed. Asia Pacific Network of People Living with HIV/AIDS (2004); Banteyerga et al. (2004); Boer and Emons (2004); Kalichman and Simbayi (2004); Mbwapbo, et al. (2004); Morrison (2004); Bond et al. (2003); Horizons (2003); Horizons, SHARAN and Population Council (2003); Nyblade et al. (2003); Policy Project (2003) consider that it is extremely important to clarify the complexity of HIV-related S&D for more efficient stigma-prevention programmes.

Ogden and Nyblade's (2005) report cites Alonzo and Renolds (1995), who explain that HIV-related S&D have long been identified as major obstacles to strategies for the prevention and treatment of HIV/AIDS. However, little has been done to combat them because policymakers believe the stigma to be 'hard to identify or measure [and] too cultural, too context-specific and too sensitive' to be tackled, as described by Alonzo and Renolds (1995).

In order to effectively design and evaluate strategies for reducing stigma, Nyblade et al. (2003) conducted qualitative research in three African countries where they found that it was always the family who cared for their PLHIV. However, their care often included hidden stigmatisation such as scandalising, abuse and judgment. Nyblade and colleagues elaborate that HIV-related S&D is often 'layered on top of pre-existing stigmas', such as in the case of MARPs.

Stoller (1998) argues that urgency should be given to efforts that strengthen stigmatised and marginalised groups' ability to face and resist stigmatisation, discrimination and oppression in their communities. The greater involvement of people living with HIV principle advocates for the active involvement of PLHIV in government ministries and CSOs to empower PLHIV, encourage positive perceptions of them and support PLHIV-based NGOs and networks. This would equip PLHIV to demand respect and the endorsement of their existence and rights, and to push for positive changes to laws and policies. Similarly, FCSW unions challenge police persecution; MSM-based NGOs play a pivotal role in advocating for access to ARVs, and women's NGOs advocate for changes to widows' inheritance rights. These efforts should parallel efforts to transform individual

attitudes toward PLHIV, for instance through media campaigns advocating tolerance and compassion.

The results of the above twenty-four studies are in line with my study results. PLHIV substance users stressed that the S&D that they are subjected to at VCCT centres and healthcare institutions frighten them away and impede their safe access to the healthcare they need. Lack of adherence to ARVs takes a toll on their health and affects their quality of life and life expectancy. The policymakers, too, concurred with the above and stressed the significance of the existence and maintenance of cooperation in Egypt between all stakeholders working in the HIV/AIDS domain, along with the MOH and UN agencies to alleviate HIV-related S&D and with the introduction of education about sexual and reproductive health in various initiatives. Most of the PLHIV substance-users expressed bitterness about the rejection and prejudice of their families, and even where their families took care of them there was still hidden stigma; a few PLHIV said that their families were extra-caring, which again was stigmatising in a way, as if the family knew that the PLHIV would die within few years. As for other pre-existing causes of stigma, my respondent MSM, FCSWs and IVDUs said that it was a relief to see society slowly becoming more tolerant of them and wished the media would present realistic scientific programmes about HIV and its modes of transmission to help to remove the prejudice against them and fear of contagion. A very few PLHIV mentioned that they had managed to explain the nature of their disease to their families and society and the aggression and prejudice had decreased considerably. However, the above twelve studies do not match my results, as my PLHIV participants felt marginalised and deserted, and very few NGOs and UN agencies included them in their activities to curb HIV/AIDS, reduce the stigma and empower them. Other NGOs/FBOs caring for MARPs are very few in number and operate with limited resources and influence.

- **In the MENA region**

I emphasise HIV prevention efforts in Yemen, Oman and Qatar here.

Badahdah et al. (2009) argue that research on the social and behavioural aspects of HIV/AIDS in the Arab world is little, S&D is still harsh, and one crucial obstacle to reducing HIV-related S&D is the absence of an Arabic AIDS Stigma Scale. To achieve this Badahdah and colleagues conducted a study on 277 students from three different MENA region countries: Kuwait, Bahrain and Jordan. The scholars aimed to explore the stigma, fear of contagion and the religiosity index on a continuum. They found negative attitudes toward PLHIV, especially from family, as a strong indicator of HIV-related

S&D throughout Arabic cultures and particularly in Kuwait. The authors created the first Arabic AIDS Stigma Scale to correct the absence of one suitable for use across the Arab world.

The Oman-NAP (2006) study matches my findings, while there are similarities and dissimilarities between my own and the Qatar paper by Milder and Novelli (1992). Oman-NAP (ibid) reports that while Oman provides a confidential anonymous telephone hotline for sexual reproductive health and HIV/AIDS matters, it is not reaching as many individuals as it could.

Milder and Novelli (1992) point out that Qatar's National AIDS Committee has a role in educating medical personnel and the public. The Committee also helps PLHIV to claim their rights and provides efficient HIV clinics run by expert healthcare personnel that serve Qatari PLHIV and expats. Although Qatar is trying to adopt a humane approach to dealing with PLHIV, due to some ethical and social struggles it does not follow the WHO recommendations regarding screening immigrants before allowing them into the country.

The first two studies by Badahdah et al. (2009) and Oman-Nap (2006) above match my findings. I also found little HIV/AIDS research in the Arab world and Egypt, and there is no Egyptian Stigma Scale/Index, sensitive to the culture of Egyptian PLHIV, yet despite the intense enacted stigmatisation of PLHIV in Egypt. However, In 2013, UNAIDS-Egypt, UNICEF-Egypt and the Egyptian Society for Population Studies and Reproductive Health published a study titled 'Stigma Experienced by People Living with HIV in Egypt'. This research, inspired by the PLHIV Stigma Index Methodology, investigated the type and extent of stigma that PLHIV face every day and was the first attempt to create an Egyptian Stigma Index for PLHIV. My participants also found Egypt's AIDS Hotline underwhelming, and the many who did not know how to access it recommended that its contact details should be spread and known better, along with details of the rest of the harm reduction and HIV prevention efforts, which are scarce and not influential.

In contrast to Milder and Novelli (1992) discussed above, Egypt-NAP has rarely and only very recently taught healthcare workers and the public about harm reduction techniques. Egyptian religious institutions obstruct the introduction and spread of sex education in schools and universities; and HIV prevention and treatment facilities such as VCCT services, harm reduction programmes and rehabilitation centres are few and far between and most have both minimal influence and healthcare personnel who stigmatise and discriminate against substance users, MARPs and PLHIV unprofessionally, frightening these highly vulnerable populations away. My respondents' recommended that NAP

personnel should be trained about HIV/AIDS and abolishing the stigma. Despite the lack of screening as a condition for entering Egypt, expatriates were deported once known to have HIV/AIDS, and Egyptians with HIV/AIDS suffered high S&D.

- **In Egypt**

The next five studies and reports discuss Egypt's stigma-reduction efforts. Lohiniva and colleagues (2015) conducted IDIs and FGDs with individuals with average and below average-education from the community in Greater Cairo area, which is next to the NAP-designated HIV Referral Hospital in Egypt. The authors present the results of a qualitative study on the associated stigma of doctors treating PLHIV, aiming to introduce the MOH's recommendations of techniques for reducing HIV-related S&D against building and spreading HIV referral hospitals and to potentiate society's acceptance of these new hospitals.

Lohiniva and colleagues (ibid) also discuss stigmatising attitudes and practices by doctors who treat or refrain from treating PLHIV. The study found that the stigma associated with HIV is deeply rooted in the religious culture of Egypt. Several participants in this study refrained from using the same facilities as PLHIV due to their fear of contagion. Respondents said that doctors who did this were afraid of contagion because they had not been properly educated about how to handle the virus and that HIV-related S&D can lead to PLHIV's depression and suicide. Some respondents frowned upon doctors who stigmatised PLHIV in this way as it is unethical and inhumane to refuse to care for them, as PLHIV have the same right as others to efficient treatment. Respondents did not respect or trust doctors who do not treat PLHIV (Mustaneh & Mouseli, 2013). The results of a study in Vietnam by Lifson et al. (2012) and another by Pharris et al. (2011) in Ethiopia match those of Lohiniva et al. (2015). Additionally, Pulerwitz et al. (2010, cited in Lohiniva et al., 2015) found that women in Egypt have more condemning and judgmental attitudes to PLHIV than men, probably due to the fact that culture and religion force women to refrain from practicing socially-unaccepted behaviour such as illegitimate sex which is frequently associated to HIV/AIDS. Our study found that intense stigmatisation of PLHIV was related to fear of contagion and of being morally judged due to contracting HIV. This matches the results of several other studies cited by Lohiniva et al. (2015) that mention the stigmatisation of PLHIV in Somaliland (Abdi et al., 2013), Yemen (Al Iryani et al., 2009), Saudi Arabia (Badahdah, 2010), Libya (El Gadi et al., 2008) and Pakistan (Farid-ul-hasnain et al., 2013), all MENA countries.

The results of the above studies have similarities and dissimilarities with my study. My participants, whether substance users or policymakers, decried doctors' S&D towards PLHIV; however they said that the majority of society approves such behaviour and favours doctors banishing PLHIV from their clinics to avoid contaminating the clinic and its equipment and infecting other patients. The results of the studies by Lohiniva et al. (2015) and Pulerwitz et al. in Egypt (2010), Lifson et al. (2012) in Vietnam and Pharris et al. (2011) in Ethiopia match my qualitative results, which also found that the stigma is deeply rooted in Egyptian culture, traditions, customs and religion. Lohiniva et al. (2015) in particular conducted their IDIs and FGDs with individuals of average and below-average education similar to some of my substance-user participants. However, the above studies were only qualitative in nature, unlike my mixed-method approach, and the sampled group were not substance-users as mine were. Lohiniva et al.'s (2015) study checked another parameter, the associated stigmatisation of doctors treating PLHIV, which my study did not. In my study women were not more condemning of PLHIV than men; and I looked at other BBVs and STIs.

The findings of the above studies worldwide, in the Arab world and in Egypt match my own, as both substance users and the policymakers in my research complained vociferously about the stigmatisation of PLHIV and MARPs and stressed the necessity for techniques and strategies to reduce S&D at the personal, societal and policy levels. The absence of stigma-reducing strategies was a strong deterrent to PLHIV and MARPs seeking safe access to HIV VCCT services to check their serostatus.

The following two studies discuss sex education. Mueller, Gavin and Kulkarni (2008) discuss abstinence from sex, delaying the first sexual encounter, resorting to non-penetrative sex, reducing the number of sex partners, and negotiating protected sex. Along the same lines, Kirby, Laris and Rolleri (2007) assert that sex education can reduce sexual risk behaviour. The latter review a large number of studies measuring the influence of sex education programmes on the sexual behaviour of youth under 25 years old around the globe, and stress that there is strong evidence that sex education does not precipitate or increase sexual behaviour: on the contrary, it puts it off or slows it down. Kirby and colleagues report that implementing such educational programmes, following the same procedures and with the same intentions, has proved influential in various countries, cultures, and groups of young people and even in very different communities.

The findings of the two studies above match those of my study. The participants stressed the importance of introducing comprehensive and proper sex education in schools and

universities to protect youth from BBV/STI infection. They decried the ignorance that jeopardises the health of young people and leads them to engage in early and pre-marital sex, multiple sexual relationships and unsafe sex. The participants admitted that this ignorance among youth and their risk attitudes and behaviour can be so harmful to them. My study also suggests that more effort is needed to educate young people in Egypt about BBVs/STIs before they begin to engage in risky sexual behaviour.

As Easton (2004, p. 211) notes, 'The concept of syndemics is useful for understanding how sociocultural, historical, and geographical, realities in urban areas interact with and compound the adverse consequences of disease.' Singer et al. (2006) explains that the term 'syndemic' also points to the importance of social conditions in disease burdens, interactions, drawbacks and repercussions. In syndemics the interaction of diseases or other health problems commonly arises due to counteractive social conditions, e.g. stigmatisation and oppressive social interactions of socially-compromised groups. The analysis of syndemic spread should consider cultural and behavioural patterns in the social context. While syndemics show social conditions and inequality in social relationships, their diffusion is mediated by the beliefs and behaviour of the communities involved, which consequently reflect human responses to perceived unfairness and social suffering. Singer and colleagues' study has little confidence in approaches that hold the individual or sabotaged family values, the responsibility for STI syndemics. Society's attitudes and behaviours are complex and sensitive to social conditions, particularly the ecosocial and psychosocial factors behind daily life experiences. Social policies and strategies should be sensitive to such factors if they are to contribute to overcoming health inequalities. Singer et al. (2005) say that research into the beliefs and deeds of people and hearing their voices help to build a more concrete foundation for influential prevention initiatives. Examples of related syndemics to my research are: SAVA (substance abuse, violence and AIDS) (Singer, 1996) and the mental health and HIV/AIDS syndemic (Stall et al., 2003). Many syndemics involve STIs (Otten et al., 1994; Craib, Meddings, & Strathdee, 1995; Chesson et al., 2005). Nusbaum, et al. (2004) report on the comorbidity of STIs with other diseases.

7.9. Policy recommendations

The implications of the research findings for future policy are briefly suggested here. The Egyptian substance users, MARPs and policymakers concerned with BBVs/STIs agreed that the most effective strategy for preventing the spread of BBVs/STIs is peer-to-peer outreach and education on preventing the spread of BBVs/STIs.

Substance users should be referred to detoxification and rehabilitation centres. Most active substance users would absorb sex education if contacted and persuaded by their rehabilitation graduate peers. However, other strategies are also needed, as stated by my participants and in other studies, and I list these below.

Outreach programmes should be launched for substance users and MARPs, and the number of substance users they attract should be increased. PLHIV should be involved in all harm-reduction initiatives, as per GIPA. The quality of peer training and education, including up-to-date and appropriate sex education messages with psychological support, should be improved. Comprehensive sex education should be introduced throughout all drug rehabilitation programmes. Partnerships and referrals among different branches of drug rehabilitation programmes should be more effectively achieved via common management. Contact details for the AIDS Hotline and the addresses of VCCT centres and pertinent healthcare facilities should be made easily accessible. The availability of the highly effective opioid substitution therapy programme (methadone and buprenorphine replacement therapy) along with needle and syringe exchange programmes should be expanded, especially in drug detoxification centres. Harm reduction programmes should be introduced in prisons and for those detained at police stations. Substance users learn only from their peers, so institutional sex education, for instance at schools and universities, should not be an alternative to peer education. Non-stigmatising and merciful empathetic religious discourse via the increased involvement of religious leaders in all harm reduction and rehabilitation initiatives should be encouraged.

Sex education should be added to school and university curricula and provided at youth centres, promoted through the media and by NGOs and healthcare service professionals, including those working with harm reduction and VCCT services, and via legislation. The media, which is a powerful tool for shaping opinions and awareness, should offer clear and non-judgmental messages about sex education, substance users, MARPs and PLHIV, with integrity and professionalism. Awareness of the magnitude of the substance-use problem in Egypt and its association with HIV/AIDS should be raised.

Gender mainstreaming in MOH policymaking in collaboration with NGOs and FBOs should be encouraged to provide fully confidential gender-sensitive services such as support groups, sexual and reproductive health services, healthcare and women-friendly drug rehabilitation environments. Police and healthcare workers should be educated about

stigmatisation to end their abuse of women, substance users and MARPs. Confidentiality guidelines should be introduced to both healthcare professionals and police.

These suggestions may not all be carried out in Egypt in the near future. However Egypt's culture is changing, and many preventive initiatives are under way. The findings of this study, together with those of previous research, provide guidance on changes that are most likely to be effective in preventing HIV, hepatitis C and B, and STIs.

Appendices

Appendix I: Introducing the research, researcher and research facilitators to the participants

Hello [name], my name is Dr Atef Bakhoun and I am a PhD student studying Sexuality and Reproductive Health in the UK.

I am conducting a study in the Freedom Drugs and HIV Programme to detect substance users' knowledge, attitude and practices regarding blood-borne viruses and sexually-transmitted infections, particularly HIV/AIDS, through their substance use and sexual practices, and to detect the best prevention methods that are preferred by substance users and which would work in our conservative Middle Eastern society.

This study is supervised by Dr Ehab El Kharrat, the founder and president of the programme.

And here is/are my research facilitator/s [name(s)] who will kindly assist me in this study.

So, have you ever been exposed to an experience like this before?

(If No) Would you like to go on with the process? Please read this informed consent and confidentiality form well to be sure that you understand it before signing it. Please go ahead and ask any questions you might have.

(If Yes) The researcher politely ends the conversation.

Appendix II: Recruitment, informed consent to voluntary participation, guarantee-of-confidentiality and anonymity form

You should know that this study is being conducted for purely scientific reasons and with the utmost confidentiality. Your name will never appear on any document and will never be mentioned. Nobody except my supervisors and myself will be able to access the content of this questionnaire/interview and we will take full measures to protect your privacy. This voice recording will be transcribed only by me or one of my research facilitators. All of the data will be kept at the university in England and no one will know your true name or identity.

You are completely free to choose to participate in this study or not, and you will have the right to refuse to answer any question and to withdraw at any point of time.

We will treat you with total respect and appreciation and with absolutely no prejudice, discrimination or persecution. You are welcome to inquire about anything related to you in this study; ask if there is anything that is not clear or if you would like more information.

Before you decide whether to take part we would like you to understand why the research is being done and what it involves. So please take time to read the following information carefully, and discuss it with others if you wish:

What is the purpose of the study?

This questionnaire/interview is part of a larger study aiming to:

identify substance users' knowledge, attitude and practices regarding sexual behaviour, drug-taking behaviour, blood-borne viruses and sexually-transmitted diseases, particularly HIV/AIDS.

identify the best methods for preventing the transmission of blood-borne viruses among Egyptian substance users which are applicable to Egypt's conservative and religious society.

It is envisaged that the results of the study will inform innovations in methods for better and more proper sex education for the substance users most vulnerable to unsafe sex and unsafe drug use.

Who will be taking part in the study?

A number of substance users and expert policymakers concerned with drugs and HIV/AIDS who have expressed interest in taking part in our study will participate.

Do I have to take part?

It is totally up to you to decide to whether you want to join the study. If you do decide to take part, you will be asked to sign a consent form in presence of a witness.

If I decide to take part, what will I have to do?

You will fill in a questionnaire or take part in a focus group discussion or a one-to-one in-depth interview. It is expected that the session will take 60 to 90 minutes. In order to participate in discussions or interviews you will need to give us your permission to audio-record them. The reason for the recording is to keep an accurate record of your contribution to the study.

Are you testing my knowledge in some way?

No, this is not a test of your knowledge. There are no right or wrong answers; we are only interested in your opinions.

Will my responses be anonymous?

Of course all the information that you provide during the course of the study will be kept strictly confidential and in accordance with the UK Data Protection Act (1998). The responses you give will be identified only by an anonymous participant number and the results will always be presented in a manner that preserves the anonymity of everyone taking part. I will carry out the data analysis myself.

What will happen to the results?

The questionnaire study is exploratory research towards a bigger study including focus group discussions and in-depth interviews on a larger scale and with a wider diversity of participants.

Who can I contact for further information?

Please contact:

Dr Ehab El Kharrat, PhD Psychiatry

Founder and President of the Freedom Drugs and HIV Programme, Egypt

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Prof Max Bachmann, PhD,

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Former-Lecturer of Medical Education

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Dr Atef Bakhoun

PhD candidate, University of East Anglia, UK

Mobile no.: +20-100-574-9740

Email: a.bakhoun@uea.ac.uk

Name of participant, signature and date

.....

Appendix III: Questionnaire

Cross sectional questionnaire survey of knowledge, attitude and practices regarding sexual behaviour and sexually-transmitted infections among Egyptian substance users

Candidate: Atef Bakhoum

External Supervision:

Dr Ehab El Kharrat, PhD

Founder and President,

Freedom Drugs and HIV Programme, Egypt

Supervisors:

Prof Max Bachmann

Professor of Health Services Research

Dr Maria Tsouroufli

Lecturer in Medical Education

School of Medicine

University of East Anglia, UK

2008

Place:.....

Date:.....

Please tick the correct answers and fill in the blanks

Section One: Personal data

101. Sex..... 1) Male 2) Female
102. When were you born? Month and year..... 88) Don't know 99) No answer
103. Have you had any schooling?..... 1) Yes 2) No 99) No answer
(If No, go to question 106)
104. What is your highest qualification?..... (Chose only one answer) 1) Primary 2) Preparatory 3) Vocational 4) Secondary 5) College or Institute 6) University or higher 9) No answer
105. If you are currently a university student, how many years of education have you had so far?..... 88) Don't know 99) No answer
106. How many years have you been living in the city where you currently live?..... 00) Less than a year 88) Don't know 99) No answer
107. In the past 12 months, have you stayed away from home for a month or more?..... 1) Yes 2) No 8) Don't know 9) No answer

Section 2: Marriage and sexual partners

201. Have you ever been married?..... 1) Yes 2) No 9) No answer
(If No or No answer go to question 203)
202. How old were you when you first married?.....
203. What describes your current status?..... 1) Married and living with my wife 2) Married and having sex with another woman 3) Married and not living with someone

4) Unmarried and having sex with a woman 5) Unmarried and not having sex with someone 6) No answer (If Unmarried and not having sex with someone go to question 301)
204. Is your partner married to someone else?..... 1) Yes 2) No 8) Don't know 9) No answer

Section 3: Sexual history: number and characteristics of sexual partners

301. Have you ever had a sexual relationship?..... (Sex means vaginal or rectal sex) 1) Yes 2) No 9) No answer (If No, go to question 703,)
302. How old were you when you first had sex?..... 88) Don't know 99) No answer
303. Have you had sex within the past 12 months?..... 1) Yes 2) No 8) Don't know 9) No answer (If No, go to question 702)
304. How many people have you have had sex with in the past 12 months?..... 88) Don't know 99) No answer
304.1 In those past 12 months, how many of them were regular sex partners, e.g. your wife/husband, girlfriend/boyfriend or anybody else? 88) Don't know 99) No answer
304.2 In the past 12 months how many were commercial sex workers? 88) Don't know 99) No answer
304.3 In the past 12 months, how many of the irregular sex partners have you never lived with, without paying them for sex?..... 88) Don't know 99) No answer
305. We've talked about having sex with people from the other sex; now, have you ever had sex with a person of the same sex?..... 1) Yes 2) No 9) No answer (If No go to question 401)
306. Have you had sex with a person of your own sex within the past 12 months?..... 1) Yes 2) No 9) No answer (If answer No go to question 401)

307. Have you had anal sex in the past 12 months?.....
 88) Don't know 99) No answer

Section 4: Sexual history: Regular partners (this question to be asked to participants that had regular sex partners, i.e. Q 304.1 is > 0)

401. Have you had sex with your regular sex partner, such as your wife/husband or girlfriend/boyfriend in the past 12 months?.....
 1) Yes 2) No 8) Don't know 9) No answer
 (Revise answer with question 304.2)

402. In the past 12 months, how would you describe your use of condoms?.....
 1) Every time 2) Almost every time 3) Sometimes 4) Never
 8) Don't know 9) No answer

403. How many regular sex partners have you had in the past month?
 88) Don't know 99) No answer

404. The last time you had sex with that regular partner, did you use a condom?.....
 1) Yes 2) No 8) Don't know 9) No answer

(If NO, go to question 406)

405. Of you both, who suggested using a condom this time?.....
 1) Me 2) Partner 3) Both 8) Don't know 9) No answer

406. Why did not you use a condom that time?.....
 (Write down all respondent's answers)

406.1 Condom unavailable.....
 1) Yes 2) No

406.2 Condoms too expensive.....
 1) Yes 2) No

406.3 Partner refused to use a condom.....
 1) Yes 2) No

406.4 I don't like using condoms.....
 1) Yes 2) No

406.5 We used other contraceptive measures.....
 1) Yes 2) No

406.6 I did not think it was important.....
 1) Yes 2) No

406.7 I did not think of it.....
 1) Yes 2) No

406.8 Other, please list.....
 1) Yes 2) No
 406.9 Don't know.....
 1) Yes 2) No
 406.10 No answer.....
 1) Yes 2) No

Section 5: Sexual history: Commercial sex workers (this question to be asked to whoever had commercial sex partners, i.e. Q 304.2 is > 0)

501. Have you paid for sex with anybody in the past 12 months?.....
 1) Yes 2) No 8) Don't know 9) No answer
 (Revise with question 304.3)
 (If No, go to question 601)
 502. How many partners have paid you for sex in the past month?
 88) Don't know 99) No answer
 502.1 In total, how many partners have you paid for sex in the past month?
 88) Don't know 99) No answer
 503. How many times have you had sex with your most recent commercial sex partner during the past month?.....
 504. In the past 12 months, how many times have you used condoms when practising sex for money?.....
 1) Every time 2) Almost every time 3) Sometimes
 4) Never 8) Don't know 9) No answer
 505. The last time you had sex with that partner did you use a condom?.....
 1) Yes 2) No 8) Don't know 9) No answer
 (If No, go to question 507)
 506. Who suggested using the condom?.....
 1) You 2) Partner 3) Both 8) Don't know 9) No answer

507. Why did not you use a condom that time?.....
 (Write down all the answers the respondent gives)
 507.1 Condom wasn't available.....
 1) Yes 2) No
 507.2 Condoms expensive.....
 1) Yes 2) No
 507.3 Partner refused.....
 1) Yes 2) No
 507.4 I don't like using condoms.....
 1) Yes 2) No
 507.5 We used other contraceptive measures.....
 1) Yes 2) No
 507.6 I never thought it is important.....
 1) Yes 2) No
 507.7 I did not think of it.....
 1) Yes 2) No
 507.8 Other, please list.....
 1) Yes 2) No
 507.9 Don't know.....
 1) Yes 2) No
 507.10 No answer.....
 1) Yes 2) No

Section 6: Sexual history: Irregular relationships (this question to be asked to whoever had irregular sex partners, i.e. Q 304.3 is > 0)

601. Have you had sex with an irregular partner without money changing hands in the past 12 months?.....
 1) Yes 2) No 8) Don't know 9) No answer
 (Revise answer with question 304.4)
 602. How many times you had sex with your last irregular partner in the past month?.....
 88) Don't know 99) No answer
 603. In the past 12 months, how many times did you use a condom with that irregular sex partner?.....
 1) Every time 2) Almost every time 3) Sometimes 4) Never
 8) Don't know 9) No answer

604. The last time you had sex with that irregular partner, did you use a condom?.....
1) Yes 2) No 8) Don't know 9) No answer
(If Yes, go to question 701: if No, continue to question 605)
605. Why did not you use a condom that time?.....
(Write down all the respondent's answers)
605.1 Condom not available.....
1) Yes 2) No
605.2 Condoms expensive.....
1) Yes 2) No
605.3 Partner refused.....
1) Yes 2) No
605.4 I don't like using condoms.....
1) Yes 2) No
605.5 We used other contraceptive measures.....
1) Yes 2) No
605.6 I did not think it was important.....
1) Yes 2) No
605.7 I did not think of it.....
1) Yes 2) No
605.8 Other, please list.....
1) Yes 2) No
605.9 I don't know.....
1) Yes 2) No
605.10 No answer.....
1) Yes 2) No

Section 7: Condoms

701. The last time you had sex did you use a condom?.....
1) Yes 2) No 3) don't know 4) No answer
(If Yes, go to question 704)
702. Have you ever used condoms during sex?.....
1) Yes 2) No 8) Don't know 9) No answer
(Is Yes, go to question 704)
703. Have you heard of condoms?.....

1) Yes 2) No 8) Don't know 9) No answer
(If No, go to question 801)
704. Do you know anywhere or anybody that you can get condoms from?
1) Yes 2) No 9) No answer
(If No, go to question 707)
705. Where can you get condoms from?
(Write down all the respondents' answers)
705.1 Shop.....
1) Yes 2) No
705.2 Pharmacy.....
1) Yes 2) No
705.3 Market.....
1) Yes 2) No
705.4 Doctor's surgery
1) Yes 2) No
705.5 Hospital.....
1) Yes 2) No
705.6 Polyclinic.....
1) Yes 2) No
705.7 Health unit.....
1) Yes 2) No
705.8 Family planning unit.....
1) Yes 2) No
705.9 Pub, hotel or motel
1) Yes 2) No
705.10 Specialised personnel (nurse, technician, paramedic)
1) Yes 2) No
705.11 Friends.....
1) Yes 2) No
705.12 Other, please list.....
1) Yes 2) No
705.13 No answer.....
1) Yes 2) No
706. How much time does it take you to acquire a condom near your home or work?.....
1) Less than an hour

2) From an hour to a day

3) More than a day

8) Don't know 9) No answer

707. How many condoms do you have in your possession now?.....

99) No answer

Section 8: Sexually-transmitted infections

801. Have you have heard of diseases that can be transmitted via sex (sexually-transmitted diseases)?.....

1) Yes 2) No 9) No answer

(If No, go to question 804)

802. Which of the following symptoms in women are associated with sexually-transmitted diseases?.....

802.1 A cold.....

1) Yes 2) No 8) Don't know 9) No answer

802.2 Vaginal discharge.....

1) Yes 2) No

802.3 Hyperacidity.....

1) Yes 2) No 8) Don't know 9) No answer

802.4 Ulcers on genital organs.....

1)Yes 2) No 8) Don't know 9) No answer

802.5 Warts on the genitals and/or anus.....

1) Yes 2) No 8) Don't know 9) No answer

802.6 Itching in/on or around the genital area.....

1)Yes 2) No 8) Don't know 9) No answer

802 7 Diarrhoea.....

1) Yes 2) No 8) Don't know 9) No answer

802.8 Blisters (small bubbles) filled with fluid on genital organs.....

1) Yes 2) No 8) Don't know 9) No answer

802 9 Vomiting.....

1) Yes 2) No 8) Don't know 9) No answer

802.10 Painful sexual intercourse.....

1) Yes 2) No 8) Don't know 9) No answer

802.11 Irregular menstrual cycle: Frequency and/or duration.....

1) Yes 2) No 8) Don't know 9) No answer

802.12 No or delayed conception.....

1) Yes 2) No 8) Don't know 9) No answer

802.13 Frequent abortion.....

1) Yes 2) No 8) Don't know 9) No answer

802.14 Other, please list.....

1) Yes 2) No 8) Don't know 9) No answer

802.15 No answer.....

1) Yes 2) No

803. Which of the following symptoms in men are associated with sexually-transmitted diseases?.....

803.1 Coloured and/or offensive penile discharge.....

1) Yes 2) No 8) Don't know 9) No answer

803.2 Vomiting and dizziness.....

1) Yes 2) No 8) Don't know 9) No answer

803.3 Ulcers on/around genital organs.....

1) Yes 2) No 8) Don't know 9) No answer

803.4 Diarrhoea and colic.....

1) Yes 2) No 8) Don't know 9) No answer

803.5 Rash on/around genital organs.....

1) Yes 2) No 8) Don't know 9) No answer

803.6 Blisters (small bubbles) filled with fluid on the genital area.....

1) Yes 2) No 8) Don't know 9) No answer

803.7 Flatulence.....

1) Yes 2) No 8) Don't know 9) No answer

803.8 Turbid urine (pus).....

1) Yes 2) No 8) Don't know 9) No answer

803. Painful micturition.....

1) Yes 2) No 8) Don't know 9) No answer

803.10 Cough.....

1) Yes 2) No 8) Don't know 9) No answer

803.11 Warts on the genitals and/or anus.....

1) Yes 2) No 8) Don't know 9) No answer

803.12 Dyspnoea.....

1) Yes 2) No 8) Don't know 9) No answer

803.13 Painful sexual intercourse.....

1) Yes 2) No 8) Don't know 9) No answer

803.14 Other, mention.....

1) Yes 2) No 8) Don't know 9) No answer 803.15 No answer..... 1)Yes 2) No
804. Have you had any genital discharge within the past 12 months? 1) Yes 2) No 8) Don't know 9) No answer
805. Have you had any genital ulcers in the past 12 months?..... 1) Yes 2) No 8) Don't know 9) No answer

Section 9: Hepatitis viruses B and C

901. Have you heard of the viruses: hepatitis B and hepatitis C?..... 1)Yes 2) No 9) No answer
(If No, go to question 1001)
902. Which of the following symptoms are associated with patients infected with hepatitis virus B or C?..... 902.1 Generalised weakness and fatigue..... 1) Yes 2) No 8) Don't know 9) No answer 902.2 Loss of appetite..... 1) Yes 2) No 8) Don't know 9) No answer 902.3 Pain in muscles and joints..... 1) Yes 2) No 8) Don't know 9) No answer 902.4 Pain in the upper right part of the abdomen..... 1) Yes 2) No 8) Don't know 9) No answer 902.5 Yellowish discolouration of eyes..... 1) Yes 2) No 8) Don't know 9) No answer 902.6 Nausea and vomiting..... 1) Yes 2) No 8) Don't know 9) No answer 902.7 Dark tea-red urine..... 1) Yes 2) No 8) Don't know 9) No answer 902.8 Clay-coloured stools..... 1) Yes 2) No 8) Don't know 9) No answer 902.9 Other, please list..... 1) Yes 2) No 8) Don't know 9) No answer 902.10 No answer..... 1) Yes 2) No
903. Do you know if you have been infected with the hepatitis B or C virus in the past 12 months?.....

1) Yes 2) No 8) Don't know 9) No answer

Section 10: Knowledge, attitude, practice and health education regarding HIV/AIDS

1001. Have you heard of a virus called HIV or a disease called AIDS?

1) Yes 2) No 9) No answer

(If No, go to question 1019)

1002. Do you know anybody infected with HIV or who has died of AIDS?

1) Yes 2) No 8) Don't know 9) No answer

(If No or Don't know, go to question 1013, otherwise continue to question 1002)

1002.1 Do you have a relative or a close friend infected with HIV or died of AIDS?.....

1) Yes, a relative 2) Yes, a close friend
3) No 9) No answer

1003. Do you think people can protect themselves from infection with HIV by proper use of condoms Every time they have sex?.....

1) Yes 2) No 8) Don't know 9) No answer

1004. Do you think it is possible to be infected with HIV through a mosquito bite?.....

1) Yes 2) No 8) Don't know 9) No answer

1005. Do you think one can protect oneself from HIV infection by having just one faithful sexual partner who is not infected with HIV?.....

1) Yes 2) No 8) Don't know 9) No answer

1006. Do you think one can protect oneself from being infected with HIV by abstaining from sex?.....

1) Yes 2) No 8) Don't know 9) No answer

1007. Do you think one can get infected with HIV by eating with someone infected with HIV?.....

1) Yes 2) No 8) Don't know 9) No answer

1008. Do you think one can get infected with HIV by using a pre-used needle?.....

1) Yes 2) No 8) Don't know 9) No answer

1009. Do you think an intravenous drug user can protect him or herself from infection with HIV by switching to another method of drug use?.....

1) Yes 2) No 8) Don't know 9) No answer

1010. Do you think someone who looks healthy and is in good health may still be infected with HIV?.....

1) Yes 2) No 8) Don't know 9) No answer

<p>1011. Do you think that a pregnant woman infected with HIV can transmit the virus to her baby?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>(If No or Don't know, go to question 1013)</p>
<p>1012. What do you think an HIV-infected pregnant mother can do to decrease the risk of transmitting it to her baby?.....</p> <p>1012.1 Take ARV medication.....</p> <p>Yes 2) No</p> <p>1012.2 Take IV Retrovir during labour?.....</p> <p>1) Yes 2) No</p> <p>1012.3 Other, please list.....</p> <p>1) Yes 2) No</p> <p>1012.4 Don't know.....</p> <p>1) Yes 2) No</p> <p>1012.5 No answer.....</p> <p>1) Yes 2) No</p>
<p>1013. Do you think an HIV-infected woman or an AIDS patient can transmit the virus to her newborn child through breastfeeding?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1014. Do you think someone in your society can secretly get tested for HIV without anybody else knowing the result?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1015. Without telling me the result of the test, have you ever had an HIV test yourself?.....</p> <p>1) Yes 2) No 9) No answer</p>
<p>(If No, go to question 1019)</p>
<p>1016. Did you take the HIV test voluntarily, or did you have to take it?</p> <p>1) Voluntarily 2) Had to 9) No answer</p>
<p>1017. Please don't tell me the result, but do you know the result of the test?</p> <p>1) Yes 2) No 9) No answer</p>
<p>1018. When did you last have an HIV test?.....</p> <p>1) Within the last year 2) 1-2 years ago 3) 3-4 years ago 4) More than 4 years ago</p>
<p>1019. Do you think one can get infected with HIV by using an infected person's razor or shaver?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1020. Do you think one can get infected with HIV by using an infected person's toothbrush?.....</p>

1) Yes 2) No 8) Don't know 9) No answer

1021. Do you think one can get infected with HIV by having a tattoo?

1) Yes 2) No 8) Don't know 9) No answer

1022. Do you think one can get infected with HIV through an unsafe blood transfusion?.....

1) Yes 2) No 8) Don't know 9) No answer

1023. Do you think HIV can be transmitted through non-sterile surgical instruments?.....

1) Yes 2) No 8) Don't know 9) No answer

1024. Do you think HIV can be transmitted via haemodialysis?.....

1) Yes 2) No 8) Don't know 9) No answer

1025. Do you think there is any total cure for HIV?.....

1) Yes 2) No 8) Don't know 9) No answer

1026. Do you think there is any treatment for HIV?.....

1) Yes 2) No 8) Don't know 9) No answer

1027. Do you think if someone finds her- or himself HIV-positive she/he would tell other people?.....

1) Yes 2) No 8) Don't know 9) No answer

1028. If you were infected with HIV, would you tell people?.....

1) Yes 2) No 3) Certain family/friends

8) Don't know 9) No answer

1029. Would you marry a person who was infected with HIV or had AIDS?.....

1) Yes 2) No 8) Don't know 9) No answer

1030. If you knew that your partner was infected with HIV or had AIDS, do you think she or he should tell you?.....

1) Yes 2) No 8) Don't know 9) No answer

1031. If your partner told you of his/her infection, would you continue your relationship with him or her?.....

1) Yes 2) No 8) Don't know 9) No answer

1032. Do you think HIV infection affects a person's quality of life?

1) Yes 2) No 8) Don't know 9) No answer

Section 11: Knowledge, attitude, practices and health education regarding hepatitis viruses B and C

1101. Do you know anybody who is infected with hepatitis virus B or C or who has died from it?.....

1) Yes 2) No 8) Don't know 9) No answer

(If No, go to question 1103)
<p>1102. Do you have a relative or close friend who is infected with hepatitis virus B or C or who has died from it?.....</p> <p>1) Yes, relative 2) Yes, close friend</p> <p>3) No 9) No answer</p>
<p>1103. Do you think people can protect themselves from infection by hepatitis virus B or C by using condoms every time they have sex?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1104. Do you think it is possible to be infected with hepatitis virus B or C through a mosquito bite?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1105. Do you think it is possible to protect oneself from this disease by sticking to one faithful sexual partner who is not infected with hepatitis virus B or C?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1106. Do you think it is possible to protect oneself from infection with hepatitis virus B or C by abstaining from sex?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1107. Do you think one can be infected with hepatitis virus B or C if he or she eats with someone infected with these viruses?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1108.1 Do you think the hepatitis B or C viruses can be transmitted from an infected person to others in his or her surroundings through everyday contact?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1109 . Do you think one can get infected with hepatitis virus B or C by using a pre-used needle?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1110. Do you think an intravenous drug user can protect him or herself from infection with hepatitis virus B or C by switching to other method of drug use?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1111. Do you think someone who looks and is healthy can still be infected with hepatitis virus B or C?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1112. Do you think a pregnant woman with hepatitis virus B can transmit it to her baby?.....</p> <p>1) Yes 2) No 8) Don't know 9) No answer</p>
<p>1113. Do you think a woman with hepatitis virus B can transmit the virus to her new born child through breastfeeding?.....</p>

1) Yes 2) No 8) Don't know 9) No answer
1114. Without telling me the result, of course; have you ever had a hepatitis virus B or C test?..... 1) Yes 2) No 9) No answer
1115. Did you take the hepatitis virus B or C test voluntarily, or did you have to take it?..... 1) Voluntarily 2) Had to 9) No answer
1116. Please don't tell me the result, but do you know the result of the hepatitis B or C test?..... 1) Yes 2) No 9) No answer
1117. When did you last have hepatitis virus B or C test?..... 1) Within the last year 2) 1-2 years ago 3) 3-4 years ago 4) More than 4 years ago
1118. Do you think one can be infected with hepatitis virus B or C by using an infected person's razor or shaver?..... 1) Yes 2) No 8) Don't know 9) No answer
1119. Do you think one can be infected with hepatitis virus B or C by using an infected person's toothbrush?..... 1) Yes 2) No 8) Don't know 9) No answer
1120. Do you think one can be infected with hepatitis virus B or C by having a tattoo?..... 1) Yes 2) No 8) Don't know 9) No answer
1121. Do you think hepatitis virus B or C can be transmitted through unsafe sex?..... 1) Yes 2) No 8) Don't know 9) No answer
1122. Do you think hepatitis virus B or C can be transmitted via a haircut using instruments that have been used on an infected person?..... 1) Yes 2) No 8) Don't know 9) No answer
1123. Do you think hepatitis virus B or C can be transmitted through non-sterile surgical instruments?..... 1) Yes 2) No 8) Don't know 9) No answer
1124. Do you think one can be infected with hepatitis virus B or C by using shared unsterilized acupuncture needles? 1) Yes 2) No 8) Don't know 9) No answer
1125. Do you think one can be infected with hepatitis virus B or C via non-sterile dental instruments?..... 1) Yes 2) No 8) Don't know 9) No answer
1126. Do you think one can be infected with hepatitis virus B or C through a non-sterile blood transfusion?.....

1) Yes 2) No 8) Don't know 9) No answer

1127. Do you think hepatitis virus B or C can be transmitted through haemodialysis?.....

1) Yes 2) No 8) Don't know 9) No answer

1128. Do you think hepatitis B or C can be transmitted through gastrointestinal endoscopy?.....

1) Yes 2) No 8) Don't know 9) No answer

1128.1 Do you think there is any cure or treatment for hepatitis B or C?

1) Yes 2) No 8) Don't know 9) No answer

1129. What do you think the treatment/cure might be?.....

1) Tablets 2) Injections 3) Both 8) Don't know 9) No answer

1130. If someone found himself/herself infected with hepatitis virus B or C, do you think he/she would tell people?.....

1) Yes 2) No 8) Don't know 9) No answer

1131. If you were infected with hepatitis virus B or C, would you tell people?.....

1) Yes 2) No 8) Don't know 9) No answer

1132. Would you marry a person infected with hepatitis virus B or C?.....

1) Yes 2) No 8) Don't know 9) No answer

1133. If you knew that your partner was infected with hepatitis virus B or C would you think that he or she should have told you?.....

1) Yes 2) No 8) Don't know 9) No answer

1134. If he/she had told you about his or her infection, would you have continued your relationship with him/her?.....

1) Yes 2) No 8) Don't know 9) No answer

1135. Do you think hepatitis virus B or C affects life expectancy and quality of life?.....

1) Yes 2) No 8) Don't know 9) No answer

1136. If you got pricked by a used needle or exposed to blood without taking proper precautions would you go for a test?.....

1) Yes 2) No 8) Don't know 9) No answer

Section12: Medical advice-seeking behaviour

1201. Have you experienced a genital discharge or ulcers in the past 12 months?.....

1) Yes 2) No 8) Don't know 9) No answer

(If No, go to question 1301)

1202. What did you do last time you had a genital discharge or ulcer?

(More than one of the following answers can be given)

1202.1 Took advice or medicaments from a clinic, polyclinic or government hospital?.....

1) Yes 2) No 8) Don't know 9) No answer

1202.2 Took advice or medicaments from a clinic, polyclinic or your work's affiliated hospital?.....

1) Yes 2) No 8) Don't know 9) No answer

1202.3 Took advice or medicaments from a clinic, polyclinic, a mosque or church hospital, or any other charity project?.....

1) Yes 2) No 8) Don't know 9) No answer

1202.4 Took advice or medicaments from a clinic, polyclinic or private hospital?.....

1) Yes 2) No 8) Don't know 9) No answer

1202.5 Took advice or medicaments from a clinic, polyclinic or private pharmacy?.....

1) Yes 2) No 8) Don't know 9) No answer

1202.6 Took advice or medicaments from a traditional healer?.....

1) Yes 2) No 8) Don't know 9) No answer

1202.7 Took medicaments that you already had at your home?.....

1) Yes 2) No 8) Don't know 9) No answer

1202.8 Did you say anything about your genital complaint to your sexual partner?.....

1) Yes 2) No 8) Don't know 9) No answer

1202.9 Did you stop having sex when you felt the symptoms?.....

1) Yes 2) No 8) Don't know 9) No answer

1202.10 Did you use a condom when you had sex while you had the symptoms?.....

1) Yes 2) No 8) Don't know 9) No answer

1203. What was the first thing that you did when you noticed the symptoms?.....

1) Took advice and medicaments from a general clinic, polyclinic or hospital.....

2) Took advice and medicaments from a clinic, polyclinic or hospital affiliated with your work.....

3) Took advice and medicaments from a clinic, a polyclinic, a mosque or church clinic or a charity hospital.....

4) Took advice and medicaments from a clinic, polyclinic or private hospital.....

- 5) Took advice and medicaments from a private pharmacy.....
 6) Took advice and medicaments from a traditional healer.....
 7) Took medication you had at home.....
 8) Other, please list.....
 88) Can't remember 99) No answer

1204. Did you take any medicine the last time you had symptoms?

- 1) Yes 2) No 8) Don't know 9) No answer

(If No, go to question 1207)

1205.4 Took medicine from a relative or friend.....

- 1) Yes 2) No

1205.5 Took medicine you already had at home.....

- 1) Yes 2) No

1205.6 Did not take medicine.....

- 1) Yes 2) No

1205.7 Don't remember.....

- 1) Yes 2) No

1205.8 No answer.....

- 1) Yes 2) No

1206. How much did you pay for the medicine? (.....)

- 888) Don't know 999) No answer

1207. The last time you had symptoms; did you obtain a prescription for medicine?.....

- 1) Yes 2) No 8) Don't know 9) No answer

(If No go to 1301)

1208. After the appearance of the symptoms, how long was it until you sought medical advice in a doctor's office, a polyclinic or a hospital?.....

- 1) a week 2) a week to a month 3) More than a month
 8) Don't know 9) No answer

1209. Did you take the prescription for the medicine?.....

- 1) Yes 2) No 8) Don't know 9) No answer

1210. Did you get the prescribed medicine?.....

- 1) Yes, all 2) Yes, but not all 3) Did not get it
 8) Don't remember 9) No answer

1211. Did you take the medicine prescribed?.....

- 1) Yes 2) No 8) Don't know 9) No answer

Section 13: Sex education and gender issues

1301. Do you think sex education is important?.....

1) Yes 2) No 8) Don't know 9) No answer

1302. If you have received formal sex education, where did you receive it?.....

(Select all answers that apply)

1302.1 Preparatory school.....

1) Yes 2) No 9) No answer

1302.2 High school.....

1) Yes 2) No 9) No answer

1302.3 University.....

1) Yes 2) No 9) No answer

1303. If you have received informal sex education, where did you receive it?.....

(Select all answers that apply)

1303.1 Advocacy campaigns.....

1) Yes 2) No 9) No answer

1303.1.1 If Yes, how much did it affect your attitude and behaviour?

1) Not at all

2) Very little

3) A little

4) Moderately

5) A lot

6) Very much

1303.1.1.1 How much would you like receive sex education through advocacy campaigns?

1) Not at all

2) Very little

3) A little

4) Moderately

5) A lot

6) Very much

1303.2 Peer outreach and education.....

1) Yes 2) No 9) No answer

1303.2.1 If yes, how much did it affect your attitude and behaviour?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.2.1.1 How much would you like receive sex education through peer outreach and education?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.3.AIDS International day ceremonies.....

- 1) Yes 2) No 9) No answer

1303.1. If yes, how much did this affect your attitude and behaviour?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.3.1.1 How much would you like get sex education through AIDS International day ceremonies?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.4 Training courses offered by the Ministry of Health or other agencies.....

- 1) Yes 2) No 9) No answer

1303.4.1 If yes, then how much did it affect your attitude and behaviour?

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.4.1.1 How much would you like to receive sex education through training courses offered by the Ministry of Health or other agencies?

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.5 AIDS Hotline.....

- 1) Yes 2) No 9) No answer

1303.5.1 If yes, how much did it affect your attitude and behaviour?

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.5.1.1 How much would you like get sex education through AIDS Hotline?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.6 Radio, television, cinema and press.....

- 1) Yes 2) No 9) No answer

1303.6.1 If yes, how much did it affect your attitude and behaviour?

- 1) Not at all

- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303. 6.1.1 How much would you like to receive sex education through radio, television, cinema and press?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.7 Parents, family and relatives.....

- 1) Yes 2) No 9) No answer

1303.7.1 If Yes, how much did it affect your attitude and behaviour?

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.7.1.1 How much would you like to receive sex education through parents, family and relatives?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.8 Friends.....

- 1) Yes 2) No 9) No answer

1303.8.1 If yes, how much did it affect your attitude and behaviour?

- 1) Not at all

- 2) Very little
- 3) A little
- 4. Moderately
- 5) A lot
- 6) Very much

1303.8.1.1 How would you like to receive sex education from friends?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.9. Pamphlets, brochures, fliers, booklets and leaflets.....

- 1) Yes 2) No 9) No answer

1303.9.1 If yes, how much did it affect your attitude and behaviour?

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.9.1.1 How would you like to receive sex education through pamphlets, brochures, fliers, booklets and leaflets?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.10. People you may know who are living with HIV.....

- 1) Yes 2) No 9) No answer

1303.10.1 If yes, how much did it affect your attitude and behaviour?

- 1) Not at all

- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.10.1.1 How would you like to receive sex education through people you may know who are living with HIV?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.11. An active substance user.....

- 1)Yes 2) No 9) No answer

1303.11.1 If yes, how did it affect your attitude and behaviour?

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.11.1.1 How would you like to receive sex education through an active substance user?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.12. A rehabilitation graduate substance user.....

- 1)Yes 2) No 9) No answer

1303.12.1 If yes, how did it affect your attitude and behaviour?

- 1) Not at all

- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.12.1.1 How would you like to receive sex education through a rehabilitation graduate substance user?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.13. Voluntary confidential counselling and testing services

- 1) Yes 2) No 9) No answer

1303.13.1 If yes, how did it affect your attitude and behaviour?

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.13.1.1 How would you like to receive sex education through voluntary confidential counselling and testing services?.....

- 1) Not at all
- 2) Very little
- 3) A little
- 4) Moderately
- 5) A lot
- 6) Very much

1303.14 Mosques or churches.....

- 1) Yes 2) No 9) No answer

1303.14.1. If Yes, how much did it affect your attitude and behaviour?

- 1) Not at all

2) Very little

3) A little

4) Moderately

5) A lot

6) Very much

1303.14.1.1 How would you like to receive sex education through mosques and churches channel?.....

1) Not at all

2) Very little

3) A little

4) Moderately

5) A lot

6) Very much

1303.15 Other, please list.....

1) Yes 2) No 9) No answer

1303.16 None.....

1) Yes 2) No 9) No answer

1304. Do you think both males and females should be exposed to sex education?.....

1) Males only 2) Females only 3) Both 4) Don't know 9) No answer

1305. Would you approve of your daughter/son, sister/brother, girlfriend/boyfriend or wife/husband being exposed to sex education from family or friends?.....

1) Yes 2) No 8) Don't know 9) No answer

1306. Would you approve for your daughter/son, sister/brother, girlfriend/boyfriend or wife/husband being exposed to sex education from specialists who are strangers?.....

1) Yes 2) No 9) No answer

1307. Do you approve of sex education at a young or an older age?

1) Young 2) Older 3) Any age 9) No answer

1308. How would you answer your son if he asked you about something related to sex?.....

1) Discuss freely

2) Discuss vaguely

3) Change the subject

- 4) Show anger
- 5) Show disgust
- 6) Ask him never to ask you such questions again
- 7) Panic
- 8) Ignore the question
- 9) No answer

1309. How would you answer your daughter if she asked you about something related to sex?.....

- 1) Discuss freely
- 2) Discuss vaguely
- 3) Change the subject
- 4) Show anger
- 5) Show disgust
- 6) Ask her never to ask you such questions again
- 7) Panic
- 8) Ignore the question
- 9) No answer

1310. Should all school or university students be required to attend sex education classes?.....

- 1) Yes 2) No 8) Don't know 9) No answer

1311. Do you approve of sex education being taught in school?

- 1) Yes 2) No 8) Don't know 9) No answer

1312. Should both boys and girls be in sex education classes together?.....

- 1) Yes 2) No 8) Don't know 9) No answer

1313. Do you feel that sex education is best taught by:.....

- 1) Parents
- 2) Schools
- 3) Both
- 4) Other, please list

1314. Has any sex education that you have received had an impact on your behaviour?.....

- 1) Yes 2) No 9) No answer

1314.1 If Yes, how much did it affect your attitude and behaviour?

- 1) Minimally

- 2) Moderately
- 3) Severely
- 4) Not at all

Section 14: Substance use and needle-sharing behaviour

1401. How many times have you ingested alcohol in the past month?

- 1) Daily 2) At least once a week 3) Less than once a week
- 4) Never 8) Don't know 9) No answer

1402. How long have you been addicted to drugs?.....

Years.....

Months.....

- Less than a month 88) Don't know 99) No answer

1403. How long have you been injecting drugs?.....

Years.....

Months.....

- Less than a month 88) Don't know 99) No answer

(If > 0, go to question 1403.1, otherwise end conversation)

1403.1. How old were you when you first started injecting drugs or someone injected them for you?

- 88) Don't know 99) No answer

1404. How many times have you injected yourself with drugs in the past month?.....

- 1) Once 2) 2-3 times
- 3) Almost once a week 4) 2-3 times a week
- 5) 4-6 times a week 6) Almost once a day
- 7) 2-3 times a day 8) 4 or more times a day
- 88) Don't know 99) No answer

1405. When injecting drugs in the past month how many times did you use a needle someone else had used?.....

- 1) Always 2) Most of the time
- 3) Half of the time 4) Sometimes 5) Never
- 8) Don't know 9) No answer

(If Never go to question 1410)

1406. In the past month have you shared needles with people in any of the following categories?.....

(select all categories that apply)

1406.1 Your regular sex partner.....

1) Yes 2) No 8) Don't know 9) No answer

1406.2 Irregular sex partner.....

1) Yes 2) No 8) Don't know 9) No answer

1406.3 Your girlfriend/boyfriend.....

1) Yes 2) No 8) Don't know 9) No answer

1406.4 Drug dealer.....

1) Yes 2) No 8) Don't know 9) No answer

1406.5 Intravenous drug user.....

1) Yes 2) No 8) Don't know 9) No answer

1406.6 Someone you don't know.....

1) Yes 2) No 8) Don't know 9) No answer

1406.7 Cellmate in jail.....

1) Yes 2) No 8) Don't know 9) No answer

1406.8 Other, please list.....

1) Yes 2) No 8) Don't know 9) No answer

1407. In the past month, how many people have you shared needles with to inject drugs?

88) Don't know 99) No answer

1408. In the past month, have you been cleaning that re-used needle before injecting drugs?.....

1) Every time 2) Almost every time

3) Sometimes 4) Never

8) Don't know 9) No answer

(If Never, go to question 1415)

1409. How do you usually clean your needles and syringes?.....

1) Cold water 2) Hot water

3) Boiling water 4) Bleach

5) Alcohol 6) Lemon

7) Other 8) Don't know

9) No answer

1410. When you injected drugs in the past month, how many times did you use a clean, unused syringe?.....

- | | |
|---------------|----------------------|
| 1) Every time | 2) Almost every time |
| 3) Sometimes | 4) Never |
| 8) Don't know | 9) No answer |

1411. In the past month how many times did you give, lend, sell or hire a syringe to someone else after you had used it?.....

(If Never, go to question 1414)

1412. In the past month, to how many people did you give, lend, sell or hire a syringe that had already been used by someone other than yourself?

88) Don't know 99) No answer

1413. To whom of the following have you: given, lent, sold or hired a used syringe in the past month?.....

1413.1 Your regular sex partner.....

1) Yes 2) No 8) Don't know 9) No answer

1413.2 Irregular sex partner.....

1) Yes 2) No 8) Don't know 9) No answer

1413.3 A friend.....

1) Yes 2) No 8) Don't know 9) No answer

1413.4 A drug dealer.....

1) Yes 2) No 8) Don't know 9) No answer

1413.5 Someone you didn't know.....

1) Yes 2) No 8) Don't know 9) No answer

1413.6 A prison cell-mate.....

1) Yes 2) No 8) Don't know 9) No answer

1413.7 Other, please list.....

1) Yes 2) No 8) Don't know 9) No answer

1414. Can you get unused syringes or needles when you need them?

1) Yes 2) No 8) Don't know 9) No answer

1415. Do you know where or from whom you can get unused syringes or needles?.....

1) Yes 2) No 8) Don't know 9) No answer

(If No, got to question 1417)

1416. Can you get unused syringes or needles from:.....

1416.1 A pharmacist you know well.....

1) Yes 2) No

1416.2 A pharmacy/shop.....

1) Yes 2) No

1416.3 Healthcare personnel (doctor/nurse).....

1) Yes 2) No

1416.4 Someone working in the drug industry or a pharmaceutical company.....

1) Yes 2) No

1416.5 A close family member or relative.....

1) Yes 2) No

1416.6 Your sexual partner.....

1) Yes 2) No

1416.7 A friend.....

1) Yes 2) No

1416.8 Another drug user.....

1) Yes 2) No

1416.9 A drug dealer.....

1) Yes 2) No

1416.10 A needle exchange programme.....

1) Yes 2) No

1416.11 By stealing from home.....

1) Yes 2) No

1416.12 Buying on the street.....

1) Yes 2) No

1416.13 Other, please list.....

1) Yes 2) No

1416.14 No answer.....

1) Yes 2) No

1417. In the past month have you injected drugs from already-filled syringes which you did not see being filled?.....

1) Yes 2) No 8) Don't know 9) No answer

1418. In the past month how many times have you injected drugs after someone put drugs into them from his or her used syringe?.....

1) Every time 2) Almost every time

3) Sometimes 4) Never

8) Don't know 9) No answer

1419. In the past month how many times have you shared preparation tools with someone else before injecting drugs?.....

1) Every time 2) Almost every time

- 3) Sometimes 4) Never
- 8) Don't know 9) No answer

1420. In the past month how many times have you injected drugs using preparation tools that someone else might have used before?.....

- 1) Every time 2) Almost every time
- 3) Sometimes 4) Never
- 8) Don't know 9) No answer

1421. Did you use a used needle the last time you injected drugs?.....

- 1) Yes 2) No 8) Don't know 9) No answer

1422. Are you currently under treatment, or have you ever received treatment for drug addiction?.....

Currently under treatment

Under treatment in the past but not at present

Never had treatment

(If Currently Under Treatment, go to question 1424

1423. How many months ago did you last receive treatment or help to quit drug addiction?

- 00) Less than a month
- 88) Don't know
- 99) No answer

1424, What kind of treatment or aid have you received to quit drug addiction?.....

Select all that apply

1424.1 Outpatient clinic counselling.....

- 1) Yes 2) No

1424.2 Support groups.....

- 1) Yes 2) No

1424.3 Methadone replacement detoxification therapy.....

- 1) Yes 2) No

1424.4 Detoxification using other drugs.....

- 1) Yes 2) No

1424.5 Residence in rehabilitation facility.....

- 1) Yes 2) No

1424.6 Forced to quit.....

- 1) Yes 2) No

1424.7 Other, please list.....

- 1) Yes 2) No

14248 No answer.....

1) Yes 2) No

1425. Do you consider yourself a substance user?.....

1) Yes 2) No 9) No answer

1426. Have you previously been clean and then started using drugs again?.....

1) Yes 2) No 9) No answer

(If Yes, go to question 1427, otherwise end the conversation)

1427. How long have you been clean?.....

Years.....

Months.....

Less than a month 88) Don't know 99) No answer

1428. What made you start using drugs again?.....

1) Frustration

2) Substance urge

3) Nothing else to do

4) Peer pressure

5) Lack of self confidence

6) Other, please list

8) Don't know

9) No answer

That was the last question; thank you very much for your interest, time and effort.

Appendix IV: Freedom Drugs and HIV Programme Research Ethics Committee approval for quantitative and qualitative studies

Freedom Programme
Director : Dr. Ehab El-Kharrat
MB BCH, MSc Psychiatry
PhD Univ. Of Kent at Canterbury, UK

علاج وإعادة تأهيل المدمنين والتوعية ضد الإدمان والأفيون
Treatment, Rehabilitation, Awareness Drugs & HIV/AIDS

برنامج الحرية
الدكتور : د. إيهاب الخهرات
ماجستير الطب النفسي - جامعة القاهرة
دكتوراة الطب النفسي - جامعة كنت إنجلترا


The Freedom Program
Prevention, Treatment and Rehabilitation of Drugs and AIDS
Research Ethics Committee
Egypt

The research ethics committee has been able to review the methodology of the research studied, titled: 'Cross Sectional Survey of Knowledge, Attitude and Practices (KAP) to Sexual Behavior and Sexually Transmitted Diseases (STDs) / HIV/AIDS among University Youth Drug Users/Abusers in Freedom Program, Egypt', to be conducted by the researcher Dr Atef Bakhoun, PhD researcher in the University of East Anglia, UK.

The committee found no objections as to the implications of this research on the participants, and also indicated that potential benefit to treatment procedure can be expected.

The committee recommends the researcher to coordinate fully with the treatment and supervision staff to ensure sufficient conditions for conducting the study, as well as, optimize the possible benefits of it.

Therefore, the committee approves the researcher's request to invite Freedom Program's clients to participate in this study, as described in the protocol.

Committee Coordinator

Dr Nanis N. William, DpPsych., MPH
Director, Training and Research

August 2008

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١٣ شارع مارييت باشا
(ميدان التحرير) القاهرة
تليفون : ٥٧٥٢٩٣٥
فاكس : ٥٧٤٢٨٥٣



The Freedom Drugs and HIV Program Egypt

The research ethics committee has been able to review the methodology of the qualitative study titled: "Initiation of Sex Education for HIV/AIDS, Hepatitis B, C and STIs Prevention in Egyptian Drug Users and Misusers", to be conducted by the researcher Dr Atef Bakhoun, MPhil/PhD researcher in the University of East Anglia, England, UK.

The committee found no objections as to the implications of this study on the participants and, also, indicated that potential benefit to the treatment procedure can be anticipated.

The committee recommends the researcher and his volunteer(s) to collaborate fully with the treatment and supervision staff in Freedom Program to sufficiently secure conditions to conduct the study, as well as, optimize the possible benefits of it.

Therefore, the research ethics committee approves the researcher's request to invite the Freedom Program's clients to this study conducted in spring 2010, as per the protocol.

Dr. Ehab El Kharrat MB BCh, MSc, PhD

Founder and President, Freedom Drugs and HIV Programme

January, 2010

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